

Nurses' Contribution to Health Information Technology of Iran's 2025 Health Map: A Review of the Document

Farahnaz SADOUGHI^a, Tania AZADI^{b,1} and Tannaz AZADI^c

^a *Professor of Health Information Management Department, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran*

^b *PhD Student of Health Information Management, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran*

^c *MSc of Medical Library and Information Sciences, Office of Vice Chancellor for Global Strategies and International Affairs, Tehran University of Medical Sciences, Tehran, Iran*

Abstract. Implementation of eHealth strategy in Iran has a history less than 17 years. Iran's eHealth strategy is developed in 2011 and is called "Iran' 2025 Health Map: Health Information Technology". Considering the important role of nurses in providing healthcare services as well as in future long term plans such as sustainable development, it is of high value to pay attention to nurses' contribution in developing eHealth strategies. Thus the purpose of this study was to investigate nurses' contribution to health information technology of Iran's 2025 health map. This study was a qualitative study conducted in 2015 through reviewing the "Iran' 2025 Health Map: Health Information Technology" official report. The strategy published in three volumes and in Persian language was downloaded through the official website of the office of Statistics and Information Technology of Iranian Ministry of Health and Medical Education (MOHME). Two main themes were identified in the report indicating areas which nurses' roles were clearly stated. The findings revealed that nurses' contribution is not clearly stated in the strategy. However, there are a few areas highlighting nurses' involvement such as "determining beneficiary groups" and "information dissemination". It is suggested that more attention needs to be paid in contribution of nurses in further actions to revise the Iran's eHealth strategy.

Keywords. Nurses, Contribution, Iran's 2025 Health Map, Health Information Technology, eHealth Strategy, Document Review

1. Introduction

It is less than 17 years which eHealth has emerged in Iran. Implementation of Hospital Information Systems (HISs) was started in 1998 by regulation of Iranian Ministry of Health and Medical Education (MOHME). Research Deputy of MOHME was then the center in charge of doing research for eHealth. Primary studies were also conducted

¹ Corresponding Author: Iran University of Medical Sciences, School of Health Management & Information Sciences, Number 6, Rashid Yasemi St., Vali-e Asr Ave., Tehran, 1996713883, Iran. E-mail: t-azadi@farabi.tums.ac.ir

during 2002- 2003. It was in 2006 when the Office of Statistics and Information Technology of MOHME was established to continue the research and to develop strategies on eHealth in Iran (1).

Office of Statistics and Information Technology carried out several eHealth projects including “Developing Electronic Health Record Architecture”, “Iranian Application Software for EHR”, “Designing Information System Architecture of Health Centers” and “Feasibility Study of Developing Iranian Health Smart Cards” (1).

One of the major activities of this office was to develop a high level strategy called “Iran’ 2025 Health Map: Health Information Technology” in 2011. To develop this strategy, high level references such as “Iran’s 20 year Vision Plan”, “Iran’s Fifth Development Plan”, “Iran’s Forth Development Plan”, “Iran’s National Strategy for Development of Health and Treatment”, “Iran’s Comprehensive Strategy for Information Technology in a 20 Year Vision” and “Main eHealth Development Strategies of Iranian Ministry of Health and Medical Education” published by the Iran’s government were reviewed.

Moreover, information technology model in health section provided by WHO was adopted as a universal framework to be implemented in “Iran’ 2025 Health Map: Health Information Technology”. In this model, to achieve macro level health objectives, foundation policies are used as the basis for developing “enabling policies” and enabling policies are in turn applied to provide eHealth applications. This concept is illustrated in figure 1.



Figure 1. WHO Information Technology Model in Health Section

One major feature in developing the “Iran’ 2025 Health Map: Health Information Technology” is the influencing participation of experts belonging to different healthcare professions. Although a variety of healthcare professionals were involved in designing, developing and implementing different projects of Iran’s eHealth strategy, it seems that contribution of nurses as well as other healthcare providers is not well defined in the final report of the strategy. Thus, the purpose of this study was to investigate nurses’ contribution to health information technology of Iran’s 2025 health map through reviewing the official report of the strategy.

According to declarations of international organizations such as WHO, and considering the fact that nurses are among the most important human resources of healthcare industry, they play an important role in future long term plans such as sustainable development. So their effective and well clarified contribution in national and international strategy development along with other healthcare providers is of high significance.

2. Methods

This study was a qualitative study conducted in 2015 through reviewing the “Iran’ 2025 Health Map: Health Information Technology” report.

The strategy published in three volumes and in Persian language was downloaded through the official website of the office of Statistics and Information Technology of Iranian Ministry of Health and Medical Education (MOHME) available via <http://it.behdasht.gov.ir/> (5) and studied carefully. Keywords related to nurses’ contribution were extracted and categorized as the main themes.

In this section, two main themes were identified including “determining beneficiary groups” and “information dissemination”. These two themes indicated the areas which nurses’ roles were clearly stated in the report of “Iran’ 2025 Health Map: Health Information Technology”.

3. Results

The first National Strategy concerning eHealth in Iran was released in 2011 and included six areas of actions as follows (2):

1. Developing standard and security architecture
2. Providing information sources of integrated health information systems
3. Knowledge management development
4. Health information architecture development
5. Public access to health information
6. Developing integrated health information systems

Although nurses along with other healthcare providers contribute in the above mentioned areas practically in healthcare settings, their significant role and contribution is not clearly stated in the strategy. However, there are a few areas highlighting nurses’ involvement in healthcare technology strategy.

One of these areas includes identifying health information beneficiary groups. These groups are information consumers and use information or create it. Beneficiary groups directly interact with health systems and include citizens, health professionals and health assistances among which health professionals are categorized as nurses and physicians providing healthcare services to all citizens. This concept is demonstrated in figure 2.

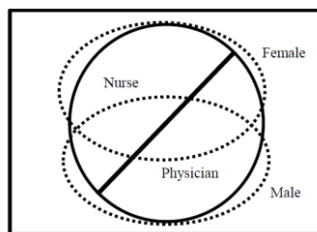


Figure 2. Health Professionals in Health Information Technology Report

Other areas emphasizing on the nurses’ contribution is the information dissemination section. In this section, some websites such as khp.ir and ino.ir

dependent to the government are presented as initiatives administered by nurses to provide information related to latest news on nursing profession as well as health issues.

4. Discussion

Although it is very clear that nurses have an effective participation in applying eHealth strategies in healthcare environments, their role and their contribution is not very well defined in "Iran' 2025 Health Map: Health Information Technology".

A similar study by Törnvall about nurses' contribution to Swedish eHealth Strategy indicated different results. She demonstrated that six areas of actions exist in Swedish eHealth Strategy and nurses have an active role in all six areas. These areas include providing accessible electronic services and information, knowledge management, providing technical infrastructure and information structure and enactment of regulations regarding the use of Information and Communication Technologies (ICT). However she indicated some areas for further improvement as follows: "patients' possibility to take part of the information and adding information in their own patient health record", "nurses' education" and "safe IT support in medication" (4).

The results of the Törnvall study is in little agreement with the results of the present study however it could be because of different local needs and different economic, social and cultural levels in both countries.

Similar for any other country, Iran has its own special economic, cultural, social and political contexts as well as priorities which make it to have different needs and policies in healthcare and health information technology industry. In addition, the speed of information technology growth and adaptation, the infrastructure and the readiness of public to accept new forms of healthcare services are various among countries. However, the point is to acquire the best practices from the lessons-to-be-learned each country share.

Since the role of nurses as one of the beneficiary groups in healthcare industry has not been stated clearly in Iran's eHealth strategy, it seems that there is the need of benchmarking nurses' role against the successful experiences of other countries in order to revise and develop Iran's eHealth strategy. Besides the Swedish eHealth strategy, another good example is the NHS Scotland eHealth Strategy.

In comparison with the NHS Scotland eHealth Strategy, there are four areas for nurses' contribution which Iran can benefit in this regard (6):

- To improve leadership of nurses in eHealth services
- To educate nurses' eHealth capabilities and to develop their skills
- To provide an appropriate infrastructure and practical solutions for nurses engagement in the "multidisciplinary, multiagency, patient focused" environment
- To enhance health information management using health information systems for nurses

Although some aspects of eHealth such as HIS and EHR are implemented in Iran, there is demand for further enhancement and nurses could play an important role in this area considering the fact that they are among the most important human resources of healthcare industry who play an important role in future long term plans such as sustainable development. Thus, their effective and well clarified contribution in

national and international strategy development along with other healthcare providers is of high significance.

Finally, it is suggested that more attention needs to be paid in contribution of each healthcare professionals especially nurses in future actions to revise the "Iran' 2025 Health Map: Health Information Technology".

References

- [1] H. Riazi, S. Aubedian, Islamic republic of Iran 2025 health map- health information technology. Tehran: Office of Statistics and Information Technology of Ministry of Health and Medical Education; 2011. V. 1, p. 1-64. 2015 [Cited 2015 Oct. 1]. Available from: http://it.behdasht.gov.ir/uploads/101_1754_Health_Map-IT_1st_Report_v.1.8.pdf
- [2] H. Riazi, E. Bitafar, S. Aubedian, Islamic republic of Iran 2025 health map- health information technology. Tehran: Office of Statistics and Information Technology of Ministry of Health and Medical Education; 2011. V. 3, p. 1-41. 2015 [Cited 2015 Oct. 1]. Available from: http://it.behdasht.gov.ir/uploads/101_1754_Health%20Map-IT%20Final%20Report%20v.1.4.pdf
- [3] WHO. Moving the nursing agenda forward: World Health Organization; 2015 [cited 2015 Oct. 1]. Available from: http://www.who.int/hrh/news/2015/global_nurse_conf-kor/en
- [4] E. Törnvall. Nurses contribution to Swedish eHealth strategy. NI 2012: Proceedings of the 11th International Congress on Nursing Informatics. **2012** (2012), 411. [Cited 2015 Oct. 1]. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3799127>
- [5] Statistics and Information Technology Office. Documents. Iranian Ministry of Health and Medical Education, Statistics And Information Technology Office; 2014 [Cited 2015 Jan. 15]; Available from: <http://it.behdasht.gov.ir/>
- [6] H. Strachan NMAHP eHealth Lead. National eHealth Programme, NHS Scotland eHealth Strategy, The Nursing, Midwifery and Allied Health Professions contribution to realising benefits of the national eHealth Programme. Scotland: The Scottish Government; 2007. p. 26.