



## **Iranian Health Research Networks and Vision of Iran by 2025: A Case of Virtual Health Network in EMRI**

***AA Keshtkar , \* Sh Djalalinia , P Khashayar, N Peykari , Z Mohammadi , B Larijani***

*Endocrinology & Metabolism Research Centre, Endocrinology & Metabolism Research Institute, Tebran University of Medical Sciences, Tebran, Iran*

**\*Corresponding Author:** *shdjalalinia@hotmail.com*

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### **Abstract**

**Background:** The present paper aims to explore the role of Health Research Networks (HRN) in facilitating and expedite achieving the prospects for goals of health research based on the visions of Iran by 2025.

**Methods:** Aiming to the main function of HSR to achieve the targeted conducting of health sciences research; more cooperation and coordination between health science researchers; avoid parallel investigations; and optimum utilization and appropriate distribution of resources, in 2000 the deputy of Research and Technology of Ministry of Health and Medical Education defined and developed a comprehensive HRN.

**Result:** There are currently 27 research networks operating under the supervision of the Deputy of Research and Technology at MOHME. All of the HRN policies are following based on their strategic planning's which are extracted from national visions of Iran by 2025.

**Conclusion:** Promoting the current position needs a reliable and feasible new strategies. The present article introduces the lessons learned of our experience in virtual web-based health research networking in Endocrinology and Metabolism Research Institute (EMRI).

**Key words:** Health, Research networks, Iran

### **Introduction**

In Iran, the science and technology health plan was developed based on the vision of Iran by 2025, as the main national convention. Indeed the Comprehensive Scientific Map of Iran outlines a coordinated and dynamic collection of goals, policies, strategies, and requisites. (1, 2). This document depicts an ideal healthy society in which health research has been considered as one of the core components of health-society and improvement of quality of life (1, 3).

To achieve such a vision we benefit from a national integrated system of community health services in which about 47 governmental medical science universities and their 400 affiliated research centers and research institutions are ma-

naged under the supervision of Ministry of Health and Medical Education (MOHME) (4-6).

More coordination is needed to growth of health researches and prevents redundant activities and produce the capacity of national synergy (7-9).

Considering above, the Health Research Networks (HRN), as a practical mechanism, can play a significant role in achieving the goals of the national health research plan (1, 10). It is comprised of a series of governmental and non-governmental research institutions with the participatory role to improve the quantity and quality health research system (11-14).

The present paper aims to explore the role of HRN in facilitating and expedite achieving the

prospects for goals of health research based on the visions of Iran by 2025.

## Methods

In 2000 the Deputy of Research and Technology of MOHME developed a comprehensive HRN to

make the research centers play a more important role in the national and international scientific competition through supporting more reproductive research policy process (4, 15-18).

Figure 1 shows the interaction between different components of HRN structure (19).

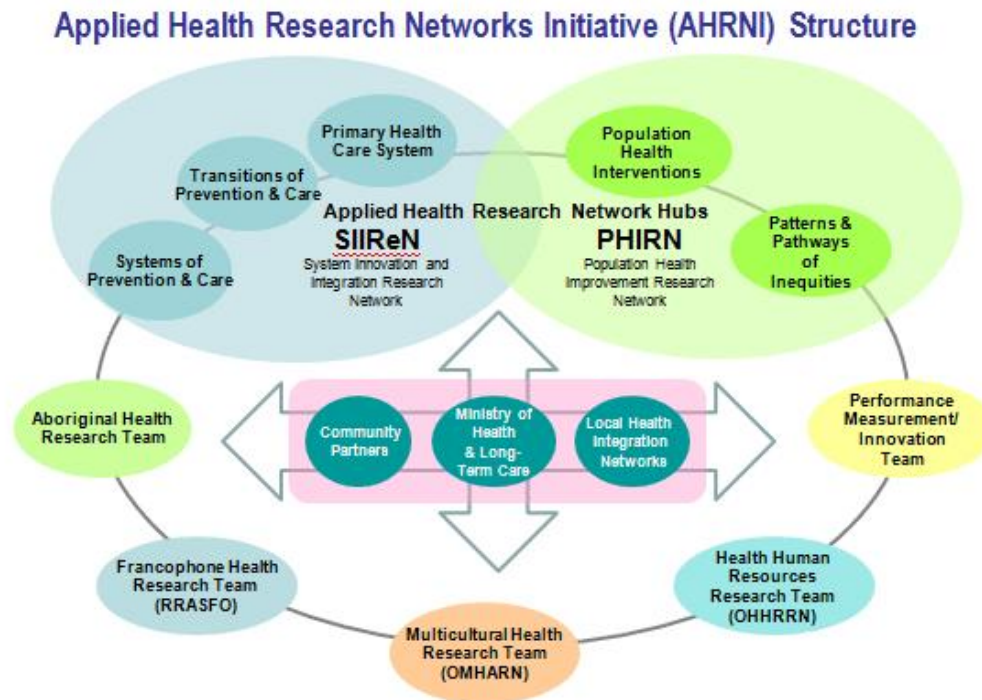


Fig. 1: The interaction between different components of HRN structure (19)

This strategy follows targeted conducting of health sciences research (HSR), cooperation and coordination between health science researchers, parallel investigation avoidance, and optimum utilization through appropriate distribution of resources (human, physical, and financial) (15,16,18).

The system consists of a founding group; general assembly; strategic council; director; and research and education council. Most of the initial HRN were started with the foundation support of the Deputy of Research and Technology of MOHME but during their development they become more empower to national and international recourse absorption and rescues mobilization.

In this model in defining of the HRN function, capacity building and stewardship have been considered as prerequisites of knowledge production .thus it is expected that the HRN through the following function reach to their predefined goals:

- Making health research stakeholders to become more involved
- Monitoring the scientific indicators of national health research based on a comprehensive Scientific Map of the Country
- Refine the research interest of each network members contributing their own specific research domain
- Resource mobilization

- Participatory health research priority setting
- Establishing strong information technology systems to communicate information to members and their utilization
- Participatory approach for designing or validating of standard guidelines for cooperation in the prevention, diagnosis and treatment related areas
- Coverage and centralize all facilities, equipment, manpower to accomplish the mission of network

## Results

There are currently 27 research networks operating under the supervision of the Deputy of Research and Technology at MOHME. Table 1 contains the list of activated HRN that have been approved by 2012 (15).

**Table 1:** The list of approved Iranian Health Networks (by Apr 2012)

No	The Network title	The year of establishment
1	The Molecular Medicine Network	2000
2	The Stem Cells Network	2005
3	The Pharmaceutical sciences Network	2005
4	The Herbal Medicine Network	2006
5	The Mental Health Network	2006
6	The Neuro Sciences Network	2006
7	The Ophthalmology Network	2006
8	The Censer Network	2006
9	The Leishmaniasis Network	2010
10	The Hepatitis Network	2010
11	The Dental and Oral Disease Network	2010
12	The Diabetes Network	2010
13	The Osteoporosis Network	2010
14	The Nanotechnology Network	2011
15	The Trauma Network	2011
16	The Musculoskeletal Network	2011
17	The Respiratory Disease Network	2011
18	The Spinal Injury Network	2011

19	The Cardiovascular Disease Network	2011
20	The Environmental Health Network	2011
21	The Social Determinants of Health Network	2011
22	The Malaria Network	2011
23	The Lasers in medicine Network	2011
24	The Medical Biotechnology Network	2011
25	The interdisciplinary Weight Disorders Network	2011
26	The Elderly Health Network	2011
27	The Medical Ethics Network	2011

Based on the country health research vision, considering the HRN' opportunities, 20,000 researchers should be involved in more than 700 active health research centers, 90 health research institutes or governmental and NGOs in areas of health, by 2025 (3).

On the other hand, the studies have opened the operational HRN experiences through which providing the evidence-based inputs and facilities leads to predetermine supervised research outputs and outcomes (5-7).

The aforementioned networks initially devised a strategic plan and determined their vision mission and goals (VMGs), based upon which they entered into research collaboration with research centers and medical sciences universities. Now the mentionable achievement all of the HRN policies are following based on their strategic planning's which are extracted from national visions of the Islamic Republic of Iran by 2025. Therefore, research networks have been proposed as a practical method to stimulate the rigor, quantity, and usefulness of health services research. And the scientific products of such networks, which can be judged through their publications, make valuable contributions to the evidence base (20, 21).

### *A new experience: A case of virtual health network in EMRI*

Now, after a decade of implementation of our HRN, we need to shift to more practical strategies

enable us to reach to country health research visions (22).

Considering that, based on our experiences and lessons learned in developing and conducting of two Diabetes and Osteoporosis Research Networks, aim to develop a comprehensive health system to deal with diabetes care in different parts of the country, we tried to structure a virtual health research network in a sub special field - diabetes as a case of a trial health research network in the “Endocrinology and Metabolism Research Institute” affiliated to Tehran University of Medical Sciences, in fall 2008 (23). Virtual Diabetes Clinic, created based on health network modeling, helped us to reach more success in application of our experience in Diabetes and Osteoporoses Research Networks.

Virtual teams defined as a group of geographically and/or temporally dispersed individuals’ link together through related information and telecommunication technologies (24, 25). Such virtual research frameworks provides an interactive, multidisciplinary approach through which direct research participants and other research stakeholders benefit from some essential opportunities such as Communication, sharing, collaboration, dissemination of research idea and output.

The virtual framework facilitate their involvement in health policy making as the main predefined expected role of HRN enable them to be more interactive in sharing core data set in professional fields or better communication in clinical guidelines development process (26-28).

Based on our experience the virtual networks proved the optimal situation for web-based supervision of the expanding policies; knowledge generation; technology development which is one of the main functions of HRS that promote the other functions and lead to recommendations for future national policies (26-29). proposed approach to network and networking can, more quickly and more reliable, bring us to the vision of science and technology health plan.

## Discussion

Each country has special research area of interest with specific vision, priorities, individual facilities and barriers and so many other considerable inclusive factors. In most, redesigning or validation of other developed methods and research strategies is the most preferable strategy for health research promotion (13, 14).

In Iran, the science and technology health plan has outlined the health researches road to the national vision Republic of Iran by 2025. We need a comprehensive evidence-based promoting program covers both our national vision as well as our regional and international health research competition views (1, 11).

HRN through the coordination of all health research stakeholders’ benefits from the partnership role to improve the quantity and quality health research system (10-12). There are many specific expectations from health networks that are more facilitate through virtual networking. Situation analyses, priority settings, planning, monitoring and evaluation, program revision, and knowledge dissemination could be run more feasible and more effective through the context of virtual participatory networks (26-28).

Based on our proposed model, virtual HRN as a reliable and feasible strategy should be adopted in our country and enables us to promote the functions and features of HRN. Totally reviewing the process of our experience accompanied with important lessons learned including concerns, challenges and limitations as follows:

- virtual web-based health research networking provides an interactive, multidisciplinary approach in health research;
- Virtual structure is key factors that consist on many different components such as tools, processes, communications systems, facilities, and organization of the team;
- Role of all participants (research centers, GOs, NGOs,...) must be defined clearly;
- Require effective communications systems act as the preventive mechanism for most common communication channels barriers;



- The core system should monitor members' communication to achieve the subjective factors such as idea generation, leadership, and problem-solving skills;
- Recourses and infrastructures should be provided based on special members' requirement.

## Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

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