IRAN

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A Brief Introduction of Iran

The History of Iran

Iran also called Persia and officially the Islamic Republic of Iran is a home to one of the world's oldest civilizations, beginning with the formation of Elamite kingdoms in the fourth millennium BCE. Furthermore, the county is situated in Western Asia with over 81 million inhabitants. Comprising a land area of 1,648,195 km2, which makes it the second largest country in the Middle East and the 17th largest in the world. The official language is Farsi and although the state religion is the Shia branch of Islam, a Sunni minority can be found throughout the nation. It's worth mentioning that besides Islam other religions such as Christianity, Judaism and Zoroastrianism practice their faith freely. Iran has large reserves of fossil fuels which include the world's largest gas supply and the fourth largest oil reserves. The sovereign state of Iran is a founding member of the UN, ECO, NAM, OIC and OPEC.
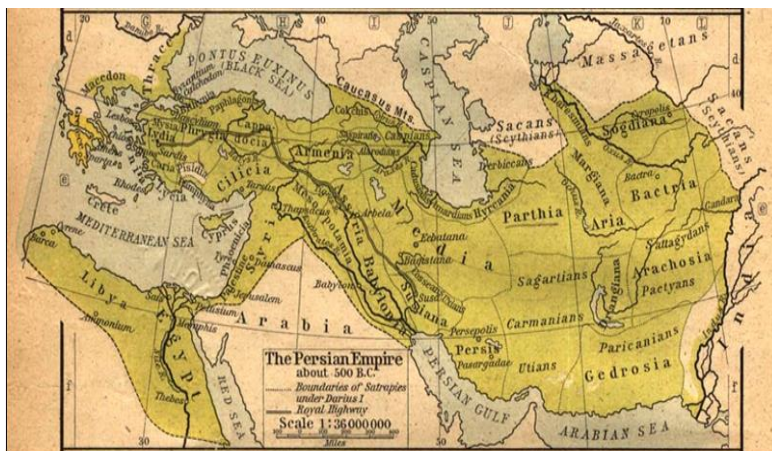

Fig. 1 Iran https://commons.wikimedia.org/wiki/Atlas_of_Iran

Tele-Medicine in Iran

Tele-Medicine in Iran (if we distinguish this concept from Information and communication technology) goes back to the ancient medical practices, where physicians consulted one another by using couriers to send their letters. In fact, we can say that Telemedicine in ancient Persia, much like other countries around the world, revolved around consultations over long distances and letter correspondence between the Colleagues. More information about this kind of Telemedicine can be found in Avicenna's journal in a more documented format (Persian post).

In the modern history, Iran was seeking to enter the medical informatics and Telemedicine fields after the Cultural Revolution (and as a result it led to the foundation of medical universities in 1987) exactly during the time where personal computers had made their way in the country. The tireless efforts of the Academic Center for Education, Culture and Research with the close collaboration of medical universities, paved the way for enrichments of more practical medical informatics methods (not academic) and Telemedicine. Although medical informatics was formally brought to universities in 2010 as a major field of study in MA and PhD Medical Informatics levels, by building more medical universities and the growth of computer usage throughout the country from 1988 to 2010, countless of activities were pursued in order to establish modern Telemedicine. In a more chronological order we will discuss about Iran's endeavors toward the establishment of Telemedicine.

Conferences and Gatherings Related to Telemedicine

1. In November 2006, the first international Telemedicine and eHealth conference was held in Iran and the following topics were discussed:
    a.   eHealth;
    b.   Telemedicine and the patient;
    c.   Telemedicine and the diagnosis;
    d.   Medical decision-making systems.

2. In the second domestic Medical Informatics Seminar, which was held at the Shahid Beheshti Medical University in 2011, one of the items that were discussed during the conference was Telemedicine.

3. Under Professor Seyed Shahabeddin Sadr's presidency of the Iran medical council, the first International eHealth congress was held in 2013 by that organization. The Nature of the conference revolved around:
- eHealth Business model (in developed and developing countries);
- Challenges of eHealth planning;

- Processing health information and data (data mining, web surfing and meaning deep analysis with extension to documents and health databases);
- Mobile health systems;
- eHealth and information management;
- Bio-informatics and medical informatics;
- Revaluating and educating eHealth in medical field;
- eHealth services in the medical field;
- Social media, consultation and health;
- Robotics and eHealth medical equipment;
- Medical ethics, regulations and rules of eHealth;
- eHealth and cognitive science technology;
- eHealth technology and prognostication for the future;
- Technological infrastructure in eHealth;
- Clinical decision making support systems and challenges on implementing them in health systems;
- The best administrative experiences regarding eHealth.

Purposes of the Above Conference

1. Encouraging and expanding the knowledge regarding eHealth;
2. Presenting the latest international achievements to Iranian scientists;
3. Exchanging views among Iranian and foreign scientists;
4. Channeling domestic research projects to foreign scientists;
5. Professor Joseph Tan (Faculty professor at University of Mac Master) attended this conference and was among the key speakers.

4. In 2013 another conference on Telemedicine was held at Amirkabir University and the following issues were discussed.

1. Telemedicine, diagnosis and treatment;
2. Telemedicine and family medical reference system;
3. Telemedicine and eHealth document;
4. Practical software for Telemedicine;
5. Designing information Structure and communication in Telemedicine;
6. Telemedicine's standards;
7. Telemedicine's data security and access;
8. Rules, regulations and morality in Telemedicine;
9. Telemedicine in military and astronomy fields;
10. Telemedicine and health tourism;
11. Medical Intelligent Systems;

12. Economy and Management in Telemedicine;
13. Modern Telemedicine technology and devices.

5. While Professor Seyed Shahabeddin Sadr was President of the eHealth Association in 2016, the Second International eHealth conference was held by the Association itself. The following issues were discussed:

1. Robotics and health;
2. Bio-Informatics and medical informatics;
3. Social eHealth, consultancy and health;
4. Developing and prospecting on Health;
5. Best practices;
6. Processing health data (data mining, web and surfing meaning deep analysis with extension to documents and health databases);
7. Clinical decision making support systems and challenges on implementing them in health systems;
8. eHealth Business models;
9. Data and eHealth management;
10. Optimization, engineering and mobile health systematical informatics;
11. Challenges of eHealth programs;
12. Technological infrastructure in eHealth;
13. eHealth and cognitive science technology;
14. Mobile health systems;
15. Medical ethics, regulations and rules of eHealth;
16. Traditional Medicine and eHealth;
17. Computer crimes in eHealth;
18. Resilience economic and eHealth;
19. Tourism and eHealth;

6. During the first domestic Medical Informatics Conference in 2016, one of the items that was discussed was "Mobile Health and long distance diagnostics" in relation to Telemedicine.

7. Till now two more conferences regarding Telemedicine were held by the Telemedicine Association: one in 2017 and another one in 2018 respectively. The items revolving around the first & second conferences were:

1. "Bed to Bed Management";
2. Economy and Management in Telemedicine;
3. Design and implementing of international education curriculum (webinar);

4. Merging Medical field with IT equipment tools in computer networks such as the internet and video conference systems and etc.;
5. Medical intelligent web sites;
6. Medical Standards.

Introducing the Associations

eHealth Association

The eHealth Association with the approval of the Ministry of Science, Research and Technology, was founded (Authorization No: 3/117461) by Professor Seyed Shahabeddin Sadr in 2014, and consequently began to work, also as a member of the International Society for Telemedicine and eHealth. Yet, before the founding of our national Association, eHealth was neglected and little attention was given to it. After the foundation measures were taken such as holding international conferences and regular meetings in the Medical Sciences Academy with Professor Seyed Shahabeddin Sadr presiding over this matter, and eHealth became the focus of many and politicians began to show interest. Furthermore, on the subject of Telemedicine and its impact on achieving health justice, attentions are on the rise.

Association board Meeting at Academy of Science of I. R. Iran

Medical Informatics Association

Medical Informatics was founded in 2013 with authorization No: 4268/5 from the Ministry of Health, Treatment and Medical Education with Dr. Hamid Moghaddasi as its president. Paying particular attention toward Telemedicine and its effects on medical activities. Hygiene justice, was one of the important items that this Association followed since its foundation.

Telemedicine Association

Iran's Telemedicine Association began its work on 2016 with Dr. Fatemeh Nemat Allahie and Dr. Sirous Momenzadeh's much appreciated endeavor. This Association has got its activity license from the health ministry. Association's activity revolves around:

1. Bed to Bed Management;
2. Economy and Management in Telemedicine;
3. Design and implementing international education curriculum (webinar);
4. Merging medical field with technological tools in computer networks such as the internet and video conference systems and other medical tools.

Long Distance Medical Research Center

This center was founded as a means to develop research, education and giving medical services in order to elevate society's hygiene level and health by using the latest long distance medical technologies.

The request for founding this center was approved by Shahid Beheshti's Medical Science University in 2008 and then by the Ministry of Health, Treatment and Medical Education in 2009. The current president is Dr. Lida Fadaiezadeh, who is an anesthesiologist.

This Association Center has 10 researchers in a science committee and 8 researchers in a non-science committee.

The greatest achievement of this Association /Center since its founding is establishing long distance medical consultancy.

Visit Center and Long Distance Care

Visit Center and Long Distance Care

For providing health services (especially in less developed areas) and expanding social justice and development, economy and services by the providers in the medical field and non-binding communication between medical centers in villages and cities with clinics and hospitals that are covered by the Tehran University of Medical Sciences, with the help of v-Learning Faculty, latest communication technology and equipment in the long distance medical field provided specialized treatment services have been put into place.

In the pilot stage of this proposal that started in 2018 specialized children and toddler physicians with other hospital colleagues, with the purpose of visiting children below the age of 12 were established at the Child Medicine Center to give specialized services for the health pilot patients of Alghadir and Anbia.

The v-Learning Faculty by conducting long distance diagnosis in order to realize the health motto of "Health for all patients across the country" in the fourth phase of its action plan which coincided with the international kidney day on Match 14th, 2019, diagnosed some of the diabetic patients who suffered from kidney disease in Islam Shahr.

Long Distance Consultancy

In the present time, the most common usage of this technology is medical consultations, which is being done quite easily. Since long distant consult is easy and broad in use, it contributes much of Telemedicine by itself. In long distant consult all manner of communication tools such as telephone, fax, email and Skype are being used.

Long Distance Surgical Operation

In Iran long distance surgery is merely used to mentor and teach medical residents. However, in some hospitals in Tehran, Shiraz and Mashhad some operations with aid of Tele-Video is being done. An example of such operation will be given.

Jahat University is the leading front in establishing long distance medicine in Iran

After the foundation of several medical hospitals in the country, meaningful activities in the medical field and the most important of these activities were using communication technology to expand the quality of patient care and developing health justice. Some of these of these activities were:

Long Distance Treatment at Home

With establishment of long distance service centers offered to patients by Management Center and Medical Academy of Tehran in 2000 with the name "Dam" it was made possible for physician to keep their patients under surveillance anytime anywhere.

The current Dam center provides service so that when a patient calls, one of the operators, usually a nurse, gives free consultation and if a physician, dentist or psychiatrist is needed, he or she will visit the patient residence. Patients have POC's equipment available in their homes such as digital thermometer device that no matter where the attending physician is, he or she will have access to patient charts and can establish a diagnosis and starting to treat, provided that he or she has internet access. The Dam center also provides Tele-Homecare for those who need a prolonged period of care.

Long Distance Patient Monitoring

Long distance patient monitoring is another service that the Medical Academy Center with the help of Medical Universities do provide.

Long Distance Facilities in the Jahat Sterility Center of Qazwin

In 2016 with collaboration of the Jahat Academy of Qazwin province and communication center of the said province, this Sterility center was set-up and equipped with Telemedicine and the speed, quality and cost of provided services in this center was improved dramatically.

It's worth mentioning that in the present time in the Jahat sterility center of Qazwin, a close video communication was installed with the Qom Sterility center and all the first aid and prescription is done there. Furthermore, a long distance Intelligence center with the help of two groups is currently being developed.

Presidential Strategic Technology Development Center

The Presidential Strategic Technology Development Center began in 2018 a nationwide survey to evaluating the existing startup programs in the field of e-Health.

Some of these startups are involved in long distance appointment making, consultancy and education.

Additional Readings

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