



ROLE & CHALLENGES – HEALTH INFORMATION TECHNOLOGY

Dr. Hema Bafila¹, Dr. Mini Amit Arrawatia²

1. Expert of Physiotherapy & Administration, Jayoti Vidyapeeth Women's University Jaipur
2. Professor, Management & Commerce, Jayoti Vidyapeeth Women's University Jaipur

Corresponding mail ID: admission@jvwu.ac.in

Abstract:

In the healthcare industry, mysterious acronyms and ambiguous job titles are not uncommon. You've lately come across a term that's unfamiliar to you and are keen to learn more about it: information technology in the field of health (HIT).

What exactly is health information technology, and how does it affect the medical community today? In a healthcare facility, technology can be found everywhere, from electronically checking in patients and updating their medical records to providing them the results of a blood draw in their online chart. Health information technology is the field that works behind the scenes to ensure that all of these systems are working smoothly.

This health science specialty may be unfamiliar to you if you have never heard the phrase before, but you may be surprised by the impact that these tech professionals have on the healthcare business. Join us as we delve into the field of health information technology to gain a better understanding of this tech-driven healthcare profession.

Patient safety is a subset of healthcare and is defined as the avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the processes of health care. In 1999 the Institute of Medicine's (IOM) report "To err is human" called for developing and testing new technologies to reduce medical error,¹ and the subsequent 2001 report "crossing the quality chiasm" called for using information technology as a key first step in transforming and changing the healthcare environment to achieve better and safer care.²

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INTRODUCTION

Healthcare information technology (HIT)

Healthcare information technology (HIT) has been defined as "the application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision making".³

Health information technology encompasses a wide range of technologies that range from simple charting to more advanced decision support and connection with medical devices. Among the numerous opportunities for improving and transforming healthcare offered by health information technology are the reduction of human error and the improvement of clinical outcomes, the facilitation of care coordination, the improvement of practice efficiencies, and the tracking of data over time. Since the publication of the initial IOM study, there has been a significant acceleration in the development and implementation of health information technology, with varied degrees of evidence regarding the influence of health information technology on patient safety becoming available.

EHRs and e-prescriptions are examples of health information technology (HIT), as are technology solutions that assist individuals in meeting health goals such as quitting smoking or controlling diabetes. This integration of technology and healthcare has resulted in more accurate electronic health records (EHRs) that accompany a patient to different healthcare institutions, as



well as greater control over one's own health through applications and better access to information for patients.

Despite the fact that health information technology (HIT) comprises a wide range of systems and types of technology, its primary focus is on protecting patient privacy while simultaneously improving patient care. Advances in secure health information technology networks have enabled physicians and other members of a patient's care team to communicate more effectively than ever before.

What is the importance of HIT?

In today's digital age, health information technology is critical for many reasons. According to Patrick Gauthier, director of healthcare solutions at Advocates for Human Potential, Inc., "in 2019, healthcare customers will continue to demand greater openness, accessibility, and customization." All of the aforementioned factors, as well as others, are supported by HIT.

For some patients, the capacity to promptly communicate patient information between hospitals and clinics—a feature known as "interoperability"—can mean the difference between life and death. According to the ONC, electronic health records (EHRs) and other health information technology (HIT) tools assist patient care teams coordinate with one another, resulting in higher-quality patient care and more inexpensive healthcare expenses. Gauthier believes that, despite the fact that the health information technology field was struggling to keep up just a few years ago as clinics and hospitals made the transition to new technology in order to comply with government mandates such as meaningful use, the field has now found its stride and will only continue to grow in importance as technology transforms the healthcare industry. "The majority of consumers today have greater confidence in health information technology than they have ever had."

The following are the components of health information technology:

Electronic health records (EHRs). EHRs help doctors to keep better track of your health information and may even allow them to examine your medical records. Even if their office is closed, you can still contact them if you have an issue. EHRs are also used to facilitate the sharing of information between your doctor and specialists; in order for specialists who want your information to have it available when they need it, it's absolutely necessary.

Personal health records (PHRs)

A personal health record (PHR) is similar to an electronic health record (EHR). Save for the fact that you have complete control over the information that enters into it. You can use a personal health record (PHR) to keep track of information from your doctor visits, however, your personal health record (PHR) can also reflect your life outside of the doctor's office. Your health priorities, such as keeping note of what you eat and how much exercise you get. Exercise is good for your heart and your blood pressure. Your personal health record (PHR) may occasionally link with your doctor's electronic health record.

Electronic prescribing (E-prescribing)

A printed prescription can be useful, get disoriented or misunderstood. E-prescribing enables you and your doctor to communicate electronically. In direct communication with your pharmacy this implies that you can visit the drugstore. It is possible to pick up drugs without needing to bring a formal prescription.



Confidentiality and security

All of these electronic systems have the potential to boost the safeguards in place to secure your health information as an illustration, electronic it is possible to encrypt information so that only authorized persons can access it. Take a look at it, Health information technology can also make it easier to document and track who is receiving care. Has gained access to your personal information.

Benefits of health information technology

While some opponents claim that electronic health records (EHRs) have resulted in physicians spending more time inputting data than interacting with patients and that government rules have become burdensome, there is widespread agreement on the benefits of health information technology. These advantages are as follows:

- The ability to use data analytics and big data to effectively manage population health management programs and reduce the incidence of expensive chronic health conditions;
- The use of cognitive computing and analytics to perform precision medicine (PM) tailored to individual patients;
- The ability to share health data among academic researchers to develop new medical therapies and drugs; and
- The rights of patients to obtain and use their own health data and collaborate in their own care with clinicians.

Challenges and Issues

The implementation of policies regarding HIT adoption has always been on the government's radar and serious exploratory initiatives are underway to explore coordination of a national health IT infrastructure and network.

However, the challenges faced for adopting HIT are:

• Government Funding:

Further development in government funding for health information technology (HIT) is essential in order to avoid the restricted use of HIT in government health facilities. Aside from that, it is necessary to ensure that the number of medical informatics specialists who have received training continues to grow.

• Computer literacy:

It should be one of the primary goals of the government that an extremely high percentage of government employees, as well as a significant number of the private sector, have a working knowledge of computers.

• Infrastructure and Coordination:

Improved support infrastructure and collaboration between the public and commercial sectors are needed to achieve this.

• Legacy Systems:

With the exception of a small number of privately held large hospitals, the vast majority of patient records are kept on paper and are extremely difficult to convert to an electronic format.



• **Standards and Guidelines:**

Local information technology systems that do not adhere to internationally recognized standards for information representation and interchange. HL7 and DICOM standards, on the other hand, have been under discussion in a number of nations, including India.

• **Interoperability:**

Concerning interoperability, discussions center on the development of standards for content and messages, as well as on the establishment of suitable security and privacy safeguards. Interoperability must be realized in the fast developing applications in areas such as home telehealth and remote monitoring for patients and customers, among other areas of interest.

• **Privacy:**

It is an outstanding question whether patient confidentiality should be protected, and the Supreme Court of India has not addressed the specific right to privacy problem relating to health information.

• **Information Overload:**

Health information technology (HIT) or telemedicine is not a panacea for the flaws in the health-care delivery system, and it is not intended to be one. It is possible that too much information transmitted via wireless media and information transmitted from a big number of patients to a single doctor or a small group of doctors will result in either an excess of information or insufficient corrective action.

The Indian government's 'Make in India' initiative (2014)

The Indian health care system, despite its flaws, has a lot going for it on a number of fronts. Because of a government-led campaign to encourage health-care providers to use electronic medical records, artificial intelligence (AI) is now able to draw insights from patient data and use them to give better treatment to more people. Telemedicine and tele consulting programs, delivered over mobile phones, are becoming more accessible to underserved rural regions as a result of the availability of broadband internet access and telecom bandwidth.

Make in India is a major national program of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector. It is being led by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India. The Make in India program is very important for the economic growth of India as it aims at utilizing the existing Indian talent base, creating additional employment opportunities and empowering secondary and tertiary sector. The program also aims at improving India's rank on the Ease of Doing Business index by eliminating the unnecessary laws and regulations, making bureaucratic processes easier, making the government more transparent, responsive and accountable.

Make in India is an initiative by the Government of India to make and encourage companies to manufacture in India and incentivize dedicated investments into manufacturing.⁴ The policy approach was to create a conducive environment for investments, develop a modern and efficient infrastructure, and open up new sectors for foreign capital. The initiative targeted 25 economic



sectors for job creation and skill enhancement,⁵ and aimed "to transform India into a global design and manufacturing hub."

"Make in India" had three stated objectives:

- to increase the manufacturing sector's growth rate to 12-14% per annum;
- to create 100 million additional manufacturing jobs in the economy by 2022;
- to ensure that the manufacturing sector's contribution to GDP is increased to 25% by 2022 (later revised to 2025).⁶

The Indian government's **"Make in India"** effort is supporting the domestic production of medical devices, which is helping to cut the prices that patients pay for products such as stents and implants, which were previously imported from other countries. According to the panelists, the regulatory environment and regulators in India must be flexible enough to embrace technological interventions such as the expansion of online pharmacies while still putting in place the necessary restrictions. Because of the large number of disadvantaged communities in India, health care innovation there could serve as a global paradigm for a shift away from treating the sick and toward preventative care and wellness, according to the authors.

The focus of Make in India program is on 25 sectors. These include: automobiles, automobile components, aviation, biotechnology, chemicals, construction, defence manufacturing electrical machinery, electronic systems, food processing, IT & BPM, leather, media and entertainment, mining, oil and gas, pharmaceuticals, ports and shipping, railways, renewable energy, roads and highways, space, textile and garments, thermal power, tourism and hospitality and wellness.

REFERENCES:

1. Patient Safety Dictionary [Internet] National Patient Safety Foundation. [[Update 2017; Accessed 2017 September]]. Available from: <http://www.npsf.org/?page=dictionaryz> . [Ref list]
2. Crossing the Quality Chasm [Internet] [[cited 2001]]. Available from: <http://www.nap.edu/catalog/10027> .
3. Brailer D. The decade of health information technology, Framework for Strategic Action [Internet] [[cited 2004]]. Available from: http://www.providersedge.com/ehdocs/ehr_articles/the_decade_of_hitdelivering_customers-centric_and_info-rich_hc.pdf.
4. Look East, Link West, says PM Modi at Make in India launch". Hindustan Times. 25 September 2014.
5. "Focus on 'Make In India'". Business Standard. 25 September 2014. Retrieved 27 February 2015.
6. Babu, M. Suresh (20 January 2020). "Why 'Make in India' has failed". The Hindu. ISSN 0971-751X
7. Arrawatia M.A., Meel P., "Information and communication technologies & woman empowerment in India", International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), 2012/10