

Summary

Attention to HIT from health policymakers and medical and IT professionals in Vietnam has been steadily increasing. Computerization and network development to improve both the quality of healthcare the management of health services and to provide information for decisionmakers are proceeding in most parts of the country. A number of hospitals are successfully employing IT to manage pharmacy and financial disclosure activities, with some initial measurable time-savings for patients and medical staff. SARS and H5N1 outbreaks in the past few years have also underscored the need for reliable records and faster reporting mechanisms.

HIT Adoption

The Department of Therapy and Department of Science and Training within the Ministry of Health are now responsible for managing and providing guidelines for IT application in the health sector. Health centers and hospitals develop their HIT based on those guidelines. HIT strategies for each hospital and health center are first determined by the institutions themselves. After settling on a specific HIT plan, a health institution can apply for approval and a budget from its direct authority in the Ministry of Health or the nearest city's health department for the following fiscal year.

Overall, computer hardware and software are present at most levels of Vietnam's public health system, but only sporadically at local levels. Telemedicine activities have just begun in tele-consultation, tele-surgery assistance, tele-imaging, and tele-cardiology. These activities have proven very useful for medical staff and patients. Examples are provided in the "Current Exemplars" section of this document.

	HIT Infrastructure
National/central hospitals	Many top-level hospitals in Vietnam have individual health information systems, The quality and daily usage of these systems vary. Most of these systems incorporate in some way Medisoft 2003 software developed by the Ministry of Health for hospitals at all levels to send statistics and reports to the Ministry's Department of Therapy.
Provincial hospitals	Provincial hospitals generally have IT networks, as well as some health information systems with linked databases for patient master indices, consultations and emergency, finance, and pharmacy.
District hospitals and commune health centers	District and commune health centers tend to have just a few computers with dial-up internet connections. Lower-level units derive much of their general medical information from television and newspaper and via training courses. Together with the United Nations Development Program, the Ministry of Health's Department of Financial Planning developed software for district and commune health information system management; however, this software is not yet widely used.

Government Policy

Policymakers in Vietnam outlined their interest in HIT development in several internal government documents relating to the suggested orientation of a national health information system. These documents include suggestions for the following:

- increasing the application of IT in health sector management
- building common software for hospitals
- improving staff capacity on IT
- strengthening cooperation with national and international organizations in HIT

The Ministry of Health is the primary driver of HIT in Vietnam, providing financial support for hospitals that have submitted appropriate IT development plans. A steering committee that includes members of the different Ministry of Health departments assesses each plan.

Vietnam's Minister of Health also recently tasked the Department of Science and Training with the management of IT application in Vietnam's health sector. Complementing those efforts, the Department of Therapy provides guidelines for hospital information systems. Finally, the Ministry's Health Information Center has additional responsibility for implementing IT projects in the health sector. Though the Health Information Center has to date experienced very limited capability to take substantive action, it streamlined activities in 2006 and anticipates much more productivity in 2007.

Official decisions regarding the application of IT in health include the following:

2006	<ul style="list-style-type: none"> • Decision 5574/QD (December 29) by the Ministry of Health issued guidelines for the development of IT application in hospital management • Decision 5573/QD-BYT (December 29) by the Ministry of Health presented criteria for HIT software for hospital management • Information Technology Law on IT (June 22) approved by the National Assembly regulates the application of IT to all social activities • Announcement 358/TB-BYT by the Ministry of Health announced the conclusion of the National Meeting on IT Adoption in Hospital Management • Decision 169/2006/QD-TTg (July 17) by the Prime Minister stipulated the investment and purchase of IT products for organizations or companies using the government budget
2004	Decision 2824/2004/QD-BYT (August 19) by the Ministry of Health determined that Medisoft 2003 would be the standard software for all hospital statistic medical reports
2002	Decision 2554 (July 4) by the Ministry of Health legalized the use of simplified registers and reporting forms nationwide
2001	Decision 112/2001/QD-TTG (July 25) approved the project on computerized the administrative management for public sectors, for the period from 2001 to 2010

Who Drives HIT?

The Ministry of Health is the primary driver for HIT adoption in Vietnam, but such adoption requires effective coordination between many government departments, especially between the Ministry of Posts and Telematics, the Ministry of Finance, and the Ministry of Planning and Investment.

Who Pays For HIT?

In the future, the government plans to increase its investment in HIT. Currently, the Ministry of Health provides most of the funding for HIT, and hospitals pay for their own health information systems with funding from the Ministry of Health at the central level and from the Health Department at the provincial level. Other national and international sources also provide limited funding for HIT.

Challenges

Skilled HIT technicians	While there is great interest among health workers in Vietnam at all levels of the health system, the majority of the population is unaware of the vast potential of HIT.
Infrastructure and resources	<ul style="list-style-type: none"> • There is a shortage of stable IT network connections throughout Vietnam, especially in rural areas and in small health centers. • Although mobile phones are prevalent in cities, they are not as widespread in rural areas; as a result, the use of telemedicine and mobile phones as key infrastructure for HIT may not be feasible.
Cost	<ul style="list-style-type: none"> • For a health center, the cost of one computer alone can be prohibitively high, not to mention the cost of a network of computers. • Most hospitals and health centers have very limited budgets for HIT operation and maintenance. • Software is also expensive, especially the cost of the software's copyright.
Standards	HIT software is not standardized at each point of care; as a result, some hospitals must enter a patient's information repeatedly in different programs.

Current Exemplars

Health information systems in major hospitals

According to the Department of Therapy, hospitals currently employing particularly effective health information systems include: the National Hospital of Pediatrics, Bachmai Hospital, Obstetric Hospital, Vietduc Hospital in Hanoi, Thai Nguyen General's Hospital, Uong Bi Vietnam-Swedish Friendship General Hospital in Quang Ninh, General Hospital in Khanh Hoa, and Children's Hospital No.1 in Ho Chi Minh City.

Infrastructure and resources

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Medisoft 2003 standard

About 300 hospitals in Vietnam are now using Medisoft 2003 software to manage statistical reports and medical records.

Telemedicine

- Since 2005 the National Hospitals of Pediatrics in Hanoi (NHP) has enjoyed live video conferences for tele-consultations and tele-training with other hospitals in different areas of the country for severe patient cases and diseases. NHP has also conducted telemedicine activities via live video conferences with other countries such as Japan, Australia, and France on bird flu, nursing training, and radiology.
- Other exemplars include tele-surgery and tele-imaging assistance between hospitals in different cities, as well as tele-cardiac intervention assistance between the Heart Institute in Hanoi and a hospital in Singapore.

Healthcare Landscape

Expenditure

Vietnam spent about 5% of its GDP on health (both public and private expenditure) in 2005 (WHO).

- General government expenditure on health as a percentage of total health expenditure (THE) is 22.6%.
- Private sector expenditure on health as a percentage of THE is 77.4%.
- Private households' out-of-pocket payment as a percentage of private health expenditure is 88.0%

Coverage

There are four types of public health insurance in Vietnam, as listed below. At the end of 2006 a total of only 34,702,000 people had health insurance coverage (41% of Vietnam's population).

- ***Compulsory Health Insurance.*** Available to civil servants and retired government staff, employees of state enterprises and enterprises with ten or more workers, employees of foreign-owned companies and organizations, and veterans. Under this scheme, 30% of Vietnam's population is covered.
- ***Voluntary Health Insurance.*** Available to pupils, students, and organizations or associations in communes. Fees are slightly lower for those in rural areas. Under this scheme, 11% of Vietnam's population is covered.

Government Announcement 16/2007/NQ-CP (February 27, 2007) states that the government intends to enhance Vietnam's insurance system by building voluntary insurance for farmers, as well as formalized unemployment Insurance. These forms of insurance are not yet functioning. A healthcare fund for the poor is still available from the official Government Fund for the Poor, but this is not officially listed in the insurance system.

Infrastructure

Vietnam's public health system consists of four levels:

Level	Managed by	Infrastructure
Provincial	Health Department of the Province of the People's Committee	<ul style="list-style-type: none"> • 304 general and specialist provincial hospitals located throughout the 64 provinces often have 50–100 beds as well as consultation and treatment rooms and are staffed by doctors, nurses, and administrators • 64 preventative medicine centers • 61 medical secondary schools • 61 pharmaceutical companies
District	Health Department of the District of the People's Committee	<ul style="list-style-type: none"> • 3014 medical specialist groups 1507 hospitals and polyclinics. (More than 600 hospitals) • district hospitals have about 100 beds each, with a focus on obstetrics, geriatrics, and pediatrics
Commune	Health Station of the Commune of the People's Committee	<ul style="list-style-type: none"> • more than 10,600 commune health stations, each with four to six beds, a delivery room, and a full medicine cabinet • health stations are staffed by doctors, pharmacists, and nurses who transport serious cases to district and central hospitals • health workers who are volunteers involved largely in immunization and family planning

According to a December 2006 Department of Therapy report, Vietnam has 1,040 public hospitals. Approximately 81 hospitals belong to, and are managed by, other specific entities, such as the Ministry of Traffic and Transportation and the Ministry of Defense. The number of private hospitals and health clinics is increasing in Vietnam, attracting wealthy clientele with their reputation for high-quality care and speed of service.