



India



Describe a successful or challenging e-health initiative your country has taken.

India in its growth has determined to use IT not only as a tool but also as an important pillar to achieve MDGs. To translate this in to action, an E-Health Vision has been prepared which comprises of following important actions:

- ✦ **One national health data network:** To develop a reliable, secure, nationwide health data network that will form the backbone of a national health information infrastructure. This will allow health information sharing amongst consumers, providers, payers, regulatory bodies, and if need arises, health professionals. The data network will have to include mechanisms for dealing with multiple data formats, languages, input devices, levels of reliability and 'IT-readiness'. The information obtained from this network will greatly increase the effectiveness and transparency of activities like monitoring and planning. The network can also be used for health education, training and awareness. A network of this kind can be built now, using a 'federated' data infrastructure that can integrate data from sources across the country.
- ✦ **Electronic data storage:** The electronic storage and regular update of data at all aspects of the health system. Eventually we would expect this to include electronic health records for all Indians that will provide every patient, care provider and care payer with the information necessary for optimal care, while reducing errors, lowering costs and administrative overheads. In the short term, electronic storage of data is a necessary step to introducing management methods that can reduce operational inefficiencies in the health system.
- ✦ **Standards:** The development of data and communication standards to enable secure, private, inter-operable, nationwide health information sharing. This will form the basis of the use of IT to share medico-legal records, follow up referrals, ensure an efficient supply chain of drugs, keep nationwide inventories, have a seamless exchange of information between hospitals and diagnostic laboratories, and so on. The standards should specify what data are stored, how the data are stored, and the mechanisms for sharing them. Development and maintenance of these standards will require the participation of public-sector organisations and private enterprises. This includes healthcare providers (both public and private), insurance providers, IT companies, central and state government. Significant steps in this direction have been taken recently by the Ministry of Communication and Information Technology, which has proposed a set of standards and guidelines to assist transactions between healthcare entities. These need to be extended to cover areas like electronic health records, drug databases and interactions, laboratory formats and technical specifications.

The various sub systems which has been started by the country are:

- ✦ Integrated Disease Surveillance System
- ✦ A data warehouse on monitoring and evaluation of outcomes
- ✦ Health (RCH) Planning and Monitoring System
- ✦ State Level M&E Systems
- ✦ Few pilots on telemedicine projects that help connect health centres in rural areas with urban referral hospitals.

There are steps being taken to merge these systems and complete the E-Health Vision.

What were the financial challenges and costs associated with the implementation of this programme?

India is a large country and any initiative needs to address a population of more than a billion people, a significant percentage of which resides in rural areas. While the pilot projects were deployed at a very low cost, the overall investment to create a National Health Data Network (NHNDN), as well as electronic data storage is significant. The Government will work through innovative Public Private Partnerships (PPP), where private enterprises will make the necessary investments, and the government will support with regulations and incentives to facilitate early adoption.

What have been the main technological challenges to implementing e-health in your country?

There are many barriers to the adoption or increased use of IT in healthcare, which include

- ✦ *Infrastructure- low power supply, poor telecommunications and connectivity*
- ✦ *Poor IT awareness and preparedness*
- ✦ *Merger of existing systems which are based on different IT technology*
- ✦ *Cost effective IT solutions*
- ✦ *Lack of standardised solutions*
- ✦ *More than 70 per cent of India is rural where the intensity of these challenges is even higher.*

Have any ethical issues been raised during the design and implementation of e-health programmes?

There is the usual concern around privacy and security of data when stored outside the hospital/healthcare centre. Mostly driven by the fear of misuse of data were it to fall into the hands of competitors. These are the issues need to be taken up more seriously.

Has the implementation of e-health programmes required any legal or regulatory changes?

The healthcare sector in India is in the concurrent sector, meaning that there are parts that are driven by the Central Government, and some by the State Government. In addition there is the private sector which accounts for almost 80 per cent of healthcare spending. While the government sector facilities are regulated by the government, there is hardly any regulation that governs private sector healthcare. Only in the last few years have a few progressive states started regulating private healthcare. In a way, this is good because regulations required to facilitate early adoption of e-health (signing up onto the NHDN, or following standards) can be created at this early stage. Thus a policy document is required to be placed for implementation across the country.

What have been the outcomes of your e-health initiatives?

It will be very early to provide outcomes of the e health vision as the implementation has just started, for example the IDSP has completed its first phase, Health Monitoring and Evaluation System have been conceptually designed etc. The major outcome to date that we have achieved are:

- ✦ *Separate allocation of funds for E health initiatives*
- ✦ *States has started taking steps for their system merger both horizontally and vertically*
- ✦ *Overall, the health sector environment has started using and understanding the importance of IT to achieve MDGs.*