The Health Smart Cards and the National Health Informatics Project in Taiwan

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The issuance of the first Health Smart Cards (HSC) from the Bureau of National Health Insurance (NHI) in the July of 2002 started a new era for personal health information exchange in Taiwan. Connected by a ubiquitous "Health Information Virtual Private Network", all the 600 hospitals, 5000 pharmacies and 17,000 clinics in Taiwan are now submitting health information to the IDC (Internet Data Center) of NHI from 40,000 card readers everyday. The HSCs are swiped through the readers 360,000,000 times a year. With visits and hospitalization information like vaccinations, diagnoses, medications and major procedures registered, the HSC has become a precursor for a nation-wide health information infrastructure.

In the end of 2005, the Department of Health initiated a 5-year plan called the National Health Informatics Project (NHIP). The NHIP is formulated in a three-layer structure, namely, the Core Architecture, the Key Applications and the Value-Added Applications.

In the Core Architecture layer, infrastructure and common platforms are laid out in 5 different component projects:

1. Information standards for Electronic Health Record and Personal Health Record
2. Ethics, legal and social impact
3. Standard platforms for health information exchange
4. Incentives and Innovations for the Health Information Technology (HIT) industry.
5. Training and education of HIT for health professionals.

The 2nd layer of the NHIP is for the Key Applications. There are four key applications planned in this layer:

1. Evidence-based medicine and clinical decision support systems for patient safety and quality of care
2. Personal health information management system for the public
3. Integrated public health information systems
4. Consumer health knowledge repository

The 3rd layer of the NHIP is for the Value-Added Applications. There are two value-added applications planned in this layer:

1. Tele-care and U-care for chronic and home care patients
2. Establishing value-added secondary medical databases from de-identified electronic health records and national health insurance research databases

With its goals set on population health, personal health, patient safety, quality of care and HIT industry, this 5-year National Health Informatics Project will hopefully become a foundation for a future health care system with better efficiency, efficacy, safety, patient-centerness, timeliness and equitability.