BUILDING A NATIONAL ELECTRONIC MEDICAL RECORD EXCHANGE SYSTEM-- EXPERIENCES IN TAIWAN

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Where is Taiwan?
Taiwan -2014

- Land area: 36,192 sq Km (13,975 sq mile)
- Population: 23 million
- Age over 65: 11.0%
- GDP: US$ 20,925 per capita
- National Health Expenditure: US$ 1,087 per capita
- NHE in GDP: 6.6%
- Life expectancy: 79.51, 76.2 (M), 83.0 (W)
Major Features of NHI in Taiwan

• Single Payer
• Universal coverage
• Comprehensive and uniform benefits
• Unlimited freedom of choice (No gatekeeper)
• Easy access and timely service
• Acceptable quality of care
• Affordable cost
• High public satisfaction
• Health IT adoption
Heath IT Adoption in Taiwan

- Health Information Network (HIN)
  - Initiated in 1988
  - Three regional network centers across Taiwan connected with frame-relay to DOH
  - Only major public hospitals were connected
  - Was not fully functional
- Health Information Network 2.0 (HIN 2.0)
  - Since 1998
  - Three regional network centers across Taiwan connected with ATM to DOH
  - Most of the public hospitals and more than 300 local health offices connected to HIN 2.0 using 64K ~ T1 connections
  - Supports electronic claim submission and other health administration functions
- National Health Informatics Project (NHIP)
  - Since 2008
- Taiwan Health Cloud
  - Since 2013
The NHI VPN

HIN

NHI VPN

IDC – Internet Data Center
SC – Service Center
HIN – Health Information Network
NHI VPN – Virtual Private Network
Health Smart Card

RSA Card issues from HCA to health professionals

non-RSA Card for all citizens
Dual-card System
EMRs with digital signature are stored in the EMR server.

A core component of digital signature.

Electronic Medical Record with Digital Signature

EMR server

Laboratory

IC card

Clinic

IC card

Clinic

IC card

HIS server
National Health Insurance Administration

Patient ID Source

Patient ID Feed

CDA Viewer

Document Registry

Query Registry

Document Consumer

EEC - Electronic Medical Record Exchange Center

Document Source

Provide & Register Document Set

Document Repository

Retrieve Document

EEC Gateway

Hospital Information System

Register Document Set
Building a National Electronic Medical Record Exchange System – Experiences in Taiwan

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Mobile Clinics
Telemonitoring of blood pressure/blood sugar with integration of CPOE
Big data is like teenage sex:
everyone talks about it,
nobody really knows how to do it,
everyone thinks everyone else is
doing it, so everyone claims they
are doing it...

(Dan Ariely)
Real-time Outbreak and Disease Surveillance, RODS

Updated: 2013/01/29
健保資料至2013/1/26

Consultation Week 就診週

1.25
10.39
Papers Published and indexed by PubMed

“Taiwan National Health Insurance Database”
P4 Healthcare and ICT

Better health

Availability, Accessibility, Affordability, Quality

The P4 Healthcare
Preventive
Predictive
Participatory
Personalized

P4P: Pay for performance

Health literacy
ICT literacy

Dr. Leroy E. Hood

Technology (ICT)

Health

Finance

Policies & Strategies
Related Infrastructure
Regulation & Standards
Leadership & Governance
Communication & Education
THANK YOU

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