EHR in Japan, -Recent Government Activities

Michio Kimura
Hamamatsu University, School of Medicine, Hamamatsu, Japan
Correspondence: kimura@mi.hama-med.ac.jp

Abstract

This paper figures Japan's activities concerning EHR since 1993, according mainly to related government activities.

This also includes current status of EMR and CPOE in Japan, relatively high rate of installation in the world.

1. Healthcare Delivery System in Japan

In Japan, "hospitals" are defined as healthcare provider with more than 20 beds. In 2005, we have 9333 hospitals, and about 90000 clinics. Averaged revenue is 137Myen per 100beds, and averaged employees are 112 per 100beds.

Medical care insurance system is based on "fee for service" payment system, while government is looking to prospective payment system, which is already applied to some 200 large hospitals. All citizens are covered by either employees healthcare insurance or community-based health insurance.

2. EMR Strategies in Japan[1]

Past major government activities for EMR are as follows;

Healthcare Information Systems Advisory Committee …10/93
"Healthcare Information System Strategy 21" ..7/94
New Healthcare Information System Joint Committee …11/94
Research and Development for EMR (purse 800Myen) …6/95
EMR was authorized as Formal Document …4/99
HELICS(Standard Board) was established …5/'00
IT Grand Design for Healthcare System …12/'01
Aid Money for EMR Installation (half aid, total purse 20Byen) by MHLW ...'01/02
Aid Money for Regional EHR (total purse 25Byen) by METI ...'02/03
Privacy Law …5/'03 (effective 4/'05)
Project on Interoperability for Health IT …06/'04.

Among them, IT Grand Design for Healthcare noted in 2001, as;

To provide practical strategies and objectives to achieve annual and numerical targets in order to promote information system

To present measures to achieve the objectives set for each phase of information system, and lay down an action plan that provides roles and targets for public and private sectors

And its action plan says;

1. Standardization in healthcare[2]
2. Infrastructure for information system
3. Implementation of model projects
4. Subsidy for introduction and maintenance of information system
5. Raising awareness

Its target stated;

By the end of the 2004 fiscal year

At least one institution in every secondary medical area across Japan should have an electronic medical record system. At least 60% of the hospitals should have an e-claim system.

By the end of the 2006 fiscal year

On a national basis, at least 60% of the hospitals with more than 400 beds and 60% of the clinics should have an electronic medical record system. At least 70% of the hospitals should have an e-claim system.

3. Current Status of Medical Information System in Japan

Order entry system

65% or more of the hospitals with more than 400 beds, in 2004.

Japan is one of the highest rate of order entry installation in the world.

Electronic medical record system

12% of the hospitals with more than 400 beds (as of the end of 2004 fiscal year) and 3% of clinic.

This is based on definition of EMR as "paperless". Author's study on Shizuoka prefecture hospitals shows this rate as 48%, which is based on the definition of "quick and thorough use of order entry database which serves information to patient, not necessarily paperless".

4. Recent Government Activities

4.1. Interoperability of Health Information Systems Project by METI ...'04-'07

Its total budget is 1.5Byen. It comprises

1. IHE-J activity support, which is Connect-a-thon support, and installation support as showcase at Saitama Medical College Hospital.
2. Inter-EMR fundamental data set for system update/vendor change by JAHIS(vendor assoc.)
3. HL7 tools development

4. Health IT CIO training course.

4.2.Standardized EMR Promotion Committee Report by MHLW...05/’05

Its report included;
1. redefinition of EMR dreams,
2. promotion of standards, i.e. HL7, DICOM, HL7 CDA, and other codes & terminology are recommended,
3. Interoperability Promotion
4. Promotion Strategy.

4.3. MHLW promotes Shizuoka Prefecture EHR for Nationwide Use ...04/’06

Shizuoka Prefecture EMR project produced many EMR components, such as progress notes, nursing observations, referral documents, clinical research database, PACSystem, and formatted document system[3],

These components are free for Shizuoka prefecture hospitals(software package only, hardware and maintenance not included). They are operable by information from order entry system in HL7 standard.
Ministry invested 88Myen to Shizuoka prefecture to improve its components and let new these components freely available nationwide.

On the other hand, Ministry approved for healthcare providers to collect 3000 yen (example) for handing out clinical data CD to patients, provided that it is in the recommended standard (HL7 and DICOM).

5. IT Strategy 2006 by Cabinet’s Office, ...06/’06, Primary Accent is on Healthcare System Restructure by IT

Its action plans are;

1. New Grand Design for IT in Health ...by 2006

2. Prevention Medicine and EMR Promotion by
Interoperable Healthcare & Health-checkup Information
Healthcare Public Key Infrastructure ..by 2006, which comprises;
Safe and inexpensive broad network,
IC card feasibility study, standardization promotion,
Measurement for IT in healthcare providers,
Interoperable EHR for large hospitals(By 2008 for 400+ beds, by 2010 for smaller),
Start implementing standardized exchange from 2006 (Nationwide Shizuoka Software)
Standard codes recommendation by 2007
Interoperability test (Connect-a-thon) for EHR from 2007
Support for IT in smaller healthcare providers(Nationwide Shizuoka Software)
Incubation of CIO in healthcare providers,
Ontology development from 2006
Development of health information gathering and utilization in EHR era
Health checkup data utilization study from 2007
Health checkup mandated from 2008 for all 40+ ages
Reimbursement claim data utilization study from 2007
Handling health data management by patients study by 2008 (Shizuoka Style CD).

3. Online Reimbursement Claim by 2011
e-Document law applied to healthcare
Incentive promotion for e-claim from 2006
Standard codes mandated by 2010
Simplification of reimbursement scheme
Electronic reimbursement tariff from 2008
Online real time verification of insurance from 2011

4. Communications
Telemedicine,
Surface television broadcast,
IC tags in materials and medicines.

6. Final Remarks -- After All,,

Who is paying for EHR?
(Within Healthcare Providers, Network and Registries)
What is going to be the Terminology?
(SNOMED-CT talk with WHO ICD11, Global vs Local Culture).

7. References

[1] Kimura M.: Roles of Health Informatics Standards in supporting seamless healthcare and improving health outcomes, eHealth Asia 2004 Conference, Kuala Lumpur, Malaysia, April 6, 2004.
[2] Kimura M.: Standard of Health Information – What is Going on and What is Helps, Medinfo 2004, Sanfrancisco,
USA, September 7.2004.
[3] Kimura M.: General Purpose Portable Data: MERIT-9 Referral document conforming both HL7 CDA R2 and IHE PDI(Portable Data for Image) in Shizuoka Prefecture EHR project, The 6th HL7 International Affliates Meeting & The 4th Asia-Pacific HL7 Conference on Healthcare Informatin Standards, Taipei, Taiwan, July 21,2005.