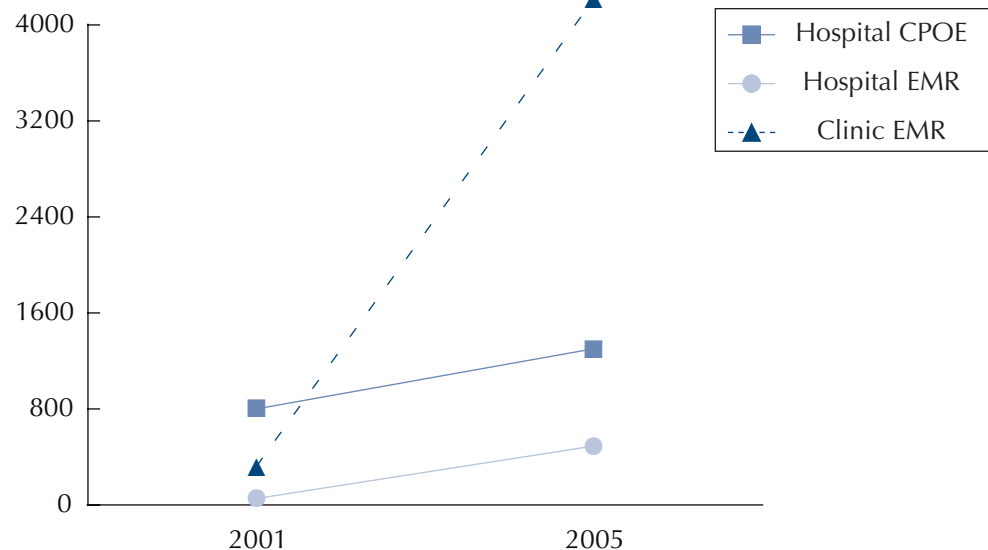


Summary

Japan has the world's highest proportion of people over 65-years-old, and this population's medical bills in Japan continue to increase by 1 trillion Yen each year. Healthcare costs are expected to rise rapidly with the further aging of the population and increased demand on health systems. In response, one of the Japanese government's top priorities is controlling public spending on healthcare, in part through investment in IT. While use of HIT in individual institutions is growing rapidly, interoperability remains a major challenge, and reaching agreement over the appropriate approach to a national EHR system has been difficult.

Hospital and Clinic Use of EMRs and CPOEs



HIT Adoption

The Japanese Ministry of Health, Labor and Welfare (MHLW) is exploring several new initiatives to expand HIT adoption, including requiring physical exam data to be stored electronically as well as introducing health smart cards.¹

Thirty-five million national health insurance e-cards have been issued in Japan since 2003, and the implementation of a personalized medical file is being considered for 2011.

¹ "Japan Plans to Digitize Health Information," *Nikkei Report*, February 14, 2007, <http://www.ihealthbeat.org/index.cfm?Action=dspItem&itemID=130617>.

Success. In late 2005 the Japanese government began promoting online processing for medical bill claims. All medical institutions are obligated to adopt this online claim system by 2011. The government is developing detailed designs for the online claim system scheme. Pilot projects began in 2006 involving more than 12 large hospitals and their regional screening and payment institutions. The government provides 30 Yen (about \$0.25) per medical bill claim to each medical institution as an incentive to use the online system (the incentive applies only to institutions that use the online system along with some other HIT system).

Setback. In 2006, half the participating municipalities abandoned a Ministry of Economy, Trade and Industry (METI) EHR pilot project when the ministry ended its financial support for the project after the first year. This was a major setback for national HIT adoption in Japan.²

HIT Implementation: Lessons Learned

<p>Framework for Information Technology Infrastructure for Health</p>	<p>Matching IT to existing workflow creates complexity in system design and increases workload. It is essential to conduct organizational reform and transformation concurrently with IT adoption. Many failures have arisen due both to lack of leadership by hospital top management and to inadequate project management by system integrators.</p>
<p>EHR customization is not always necessary</p>	<p>Until recently, EHR systems were mostly customized. Cost pressures, as well as better understanding over time of hospital requirements, have led to an increase in non-customized EHR systems. The initial cost of non-customized EHR system installation is now less than one million Yen per bed.</p>

Government Policy

In January 2006 Japan's Cabinet IT Strategic Headquarters issued its most recent "e-Japan" strategy, which seeks to reduce health and other social costs through structural reform. The focus is on the establishment and promotion of both healthcare and e-government ICT infrastructures.

Who Drives HIT?

Japan's Cabinet IT Strategy Headquarters has been driving IT adoption, primarily through the e-Japan project and since 2006 through its IT New Reform Strategy. In March 2007 the government announced the "Information Grand Design on Healthcare, Health, Elderly Care, and Social Security," which outlined four specific areas of reform:

- collection and analysis of health check-up, treatment, and receipt data
- installing EMRs and creating interoperability in medical institutions
- creating receipts for data online
- establishing personal health cards

² "Japanese EHR Project Rejected," *Daily Yomiuri Online*, August 16, 2006, <http://www.ihealthbeat.org/index.cfm?Action=dspItem&itemID=124268>.

Who Pays For HIT?

Previously, the government subsidized HIT adoption. For example, from 2001 to 2003 the government provided 280 hospitals with subsidies worth 45 billion Yen to promote electronic medical record adoption. In 2004, at the end of the subsidy period, 12% of hospitals had adopted EMR (half the rate in the United States). After 2004 the pace of adoption declined as hospitals became responsible for paying for EMR.

Challenges

Challenges	Solutions
Few IT experts in Japanese hospitals. This shortage is due to the late adoption of IT in these institutions as well as to a tight labor market for computer engineers in the country. As a result, Integrated Hospital Information Systems and EHRs tend to be integrated by single vendors outsourced by hospitals.	METI hopes to institute policies that put into place skilled Chief Information Officers (CIOs) in hospitals and improve IT competency throughout the hospital.
Difficulty networking hospitals and clinics. No standards exist for paper medical records, nevermind EHRs. As a result many uninteroperable versions of customized EHRs with identical functions exist.	The Ministry of Health, Labor and Welfare and METI are trying to coordinate medical services and patient information sharing among hospitals and clinics in each region.
Heavy focus on late-stage disease rather than early health. In general, a healthy person does not focus too much on health issues until the onset of illness.	Society must incentivize healthy behaviors and a proactive approach to health. Health education from an early age is critical in this regard.

Future Direction

Personal health cards are under discussion in the Japanese government, and next steps will be reached by during FY2007. The card would initially be distributed on a voluntary basis to all holders of national insurance (including dependents) and would contain all health check-up, medical, and payment records for participating individuals. The benefit would be for the individual to accrue, own, and analyze all of his or her own health-related information. Personal health cards would be interoperable between medical institutions and would facilitate a streamlined payment processes. Current expectations call for a minimum of five years for card roll-out.

Healthcare Landscape

Expenditure

In 2005 Japan spent 7.7% of its GDP on healthcare. The government spent 17.2% of its general budget on health.

Coverage

- Japan has universal healthcare coverage, which the country provides through the community-based National Health Insurance scheme or the Employees' Health Insurance. Membership in one or the other scheme is compulsory. Monthly

premiums are calculated slightly differently for each, but are based mostly on salary. Coverage for medical costs also varies between the schemes.

- Members in the Employees' scheme must also join the Employees' Pension Insurance scheme; there is also a National Health Program for the Elderly for people over age 70 that is funded by contributions from the two main insurance schemes. These schemes currently pay 10% of costs, though this figure is expected to increase. Private health insurance is rarely utilized in Japan.

Infrastructure

As of October 2002 there were 169,079 medical institutions in operation in Japan. From the early 1950s through 1990 the number of hospitals in Japan increased annually, but in 1992 the number decreased to less than 10,000. By contrast, the number of general clinics with no beds continues to increase.³

³ Director-General for Policy Planning, Ministry of Internal Affairs and Communications, "Guide to Official Statistics in Japan," <http://www.stat.go.jp/English/index/official/215.htm#2>.