Addressing Japan's Healthcare Challenges with Information Technology

RECOMMENDATIONS FROM THE U.S. EXPERIENCE

Author
John D. Halamka

July 2011

CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

Addressing Japan's Healthcare Challenges with Information Technology

RECOMMENDATIONS FROM THE U.S. EXPERIENCE

Author
John D. Halamka

July 2011

CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

About CSIS

At a time of new global opportunities and challenges, the Center for Strategic and International Studies (CSIS) provides strategic insights and bipartisan policy solutions to decisionmakers in government, international institutions, the private sector, and civil society. A bipartisan, nonprofit organization headquartered in Washington, D.C., CSIS conducts research and analysis and develops policy initiatives that look into the future and anticipate change.

Founded by David M. Abshire and Admiral Arleigh Burke at the height of the Cold War, CSIS was dedicated to finding ways for America to sustain its prominence and prosperity as a force for good in the world.
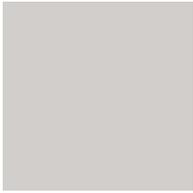
Since 1962, CSIS has grown to become one of the world's preeminent international policy institutions, with more than 220 full-time staff and a large network of affiliated scholars focused on defense and security, regional stability, and transnational challenges ranging from energy and climate to global development and economic integration.

Former U.S. senator Sam Nunn became chairman of the CSIS Board of Trustees in 1999, and John J. Hamre has led CSIS as its president and chief executive officer since 2000.

CSIS does not take specific policy positions; accordingly, all views expressed herein should be understood to be solely those of the author(s).

ADDRESSING JAPAN'S HEALTHCARE CHALLENGES WITH INFORMATION TECHNOLOGY

RECOMMENDATIONS FROM THE U.S. EXPERIENCE

John D. Halamka[1]

Introduction

Japan is at a crossroads in its healthcare history.

Japan is facing the long-term policy challenge of an aging society, which requires increasing amounts of healthcare, both high acuity care and long-term chronic care. This need for additional health services in the face of significant national budget deficits—with a national debt approaching 200 percent of GDP—suggests the need to identify and implement new efficiencies in health care services.

Many countries are increasing investments in healthcare information technology (IT) on a national basis to increase efficiency of services, while improving the quality and safety of care. In the United States, healthcare IT investments are foundational to healthcare reform and implementing new payment systems that encourage care coordination and wellness of the aging population, while reducing projected costs.

In parallel with a long-term healthcare IT effort, the combined disasters of the great earthquake, tsunami, and Fukushima nuclear plant crisis have destroyed much of the healthcare delivery infrastructure of the Tohoku region, creating the challenge and opportunity of rebuilding the healthcare system in the region. In the United States, new healthcare IT was used successfully in the New Orleans region to improve healthcare delivery in the aftermath of Hurricane Katrina, one of the most significant natural disasters in the nation's history.

In this paper, we discuss the possible elements of a major national healthcare IT initiative for consideration by Japanese policymakers. Healthcare IT can support Japan's long-term nationwide efforts to achieve healthcare efficiency, quality, and safety goals.

In addition, in the Tokoku region, a healthcare IT system could support the development of a new health services system in the aftermath of the natural disasters as new clinics and other health

---

[1] John D. Halamka, MD, MS, is chairman of the Healthcare Information Technology Standards Panel and professor and chief information officer at the Harvard School of Medicine in Boston, Massachusetts.

facilities are being planned and constructed. We suggest that special pilot projects in the Tohoku region could serve as a model for the rest of the country.

The strategic implementation of healthcare IT can thus address both long-term concerns about the costs of providing health care to an aging society and short-term challenges of proving quality care in the areas of Tohoku where health care services are being restored.

Key Features of a Healthcare IT Program

In order to successfully implement the electronic health records and healthcare information exchanges needed to accomplish these healthcare goals, both policy and technology changes would be needed.

A national Japanese healthcare IT program should include:

1. Widespread adoption of electronic health records (EHR) in hospitals and provider offices.

2. A national healthcare identifier that would enable linking of records among multiple facilities and the creation of a national emergency care database.

3. A privacy framework that would provide the policy guidance supporting the sharing of electronic health records among all 47 prefectures as needed for care coordination, quality measurement, and clinical research.

    Privacy concerns are paramount in Japan. Through the use of strong policies such as mandatory breach notification, civil penalties for privacy violations, a unified approach to consent, model data use agreements, and security standards, patient privacy preferences could be protected.

4. A security framework that would permit and encourage the use of the public Internet for transmission and sharing of electronic records, as long as appropriate standards, business practices, and controls are put in place.

    Japan has state-of-the-art wireless and wired networks, arguably the best in the world. However, few hospitals and clinicians now use this infrastructure to exchange healthcare information, coordinate care, or engage patients/families.

    The public Internet is appropriate for healthcare information as long as the proper, rigorous policies and technologies are in place before data is exchanged.

5. Data standards that would break down barriers to data exchange. These could include international standards, such as clinical document architecture (CDA), continuity of care document (CCD), and continuity of case record (CCR), as well as Japanese standards that have

been successfully implemented, such as medical markup language (MML), which is utilized by Dr. Hiroyuki Yoshihara's Dolphin Project at Kyoto University.[2]

6. Decentralized implementation programs based at the prefecture level. These programs, organized on a regional basis, would assist hospitals, physicians and other providers to plan, install, and use electronic health records successfully. Iwate and Miyagi prefectures could be ideal places to initiate these decentralized programs given the need to rebuild healthcare infrastructure in these prefectures.

Benefits of a Healthcare IT Program

A properly structured national healthcare IT program would provide important benefits to the Japanese health system.

A national care healthcare IT system would:

1. Increase the overall efficiency of the Japanese healthcare system substantially and generate significant savings. Currently, healthcare payment incentives in Japan are misaligned, and hospitals are encouraged to provide redundant and unnecessary testing and other services. Japan needs new tools to coordinate care, measure variations in care delivery, and engage patients/families.

   The electronic health record provides the foundation to gather data about care processes and outcomes that will empower new payment approaches that better align incentives to deliver quality care rather than just a greater quantity of care.

   To achieve efficiency goals, the sharing of data among hospitals and ambulatory care providers must be implemented. With data sharing, patient transitions can be coordinated, reducing testing, errors, and inappropriate care.

   By submitting data to public health entities, disparities in care can be rapidly identified and resources allocated most efficiently. By sharing data with patients and families, patients will be more engaged and more able to adhere to their care plans, further reducing redundancy and waste.

   Additionally, patients should be able to gather data in their homes and transmit information to providers for early detection of changes in condition, enabling interventions that will keep patients out of hospitals, reducing inpatient care costs, and redirecting investment to more cost effective home care.

2. Improve quality and effectiveness of care. Hospitals in Japan, except for a few examples, have not widely adopted best practices such as computerized provider order entry, decision support systems, or healthcare information exchange.

---

[2] See Kenji Araki et al., "Medical Markup Language (MML) for XML-based Hospital Information Interchange," *Journal of Medical Systems* 24, no. 3 (June 2000): 195–211.

These technologies, as discussed below, can reduce errors of omission and commission. They also enable evidence-based and personalized medicine to be practiced. They reduce errors by ensuring best practices are incorporated into hospital workflows.

Physicians in Japan, outside of academic settings, have not widely adopted electronic health records that include e-prescribing, clinical documentation, and electronic lab workflow. These technologies, as discussed below, can improve medication accuracy, care planning, and timeliness of diagnosis.

3. Reduce the number of hospitalizations, the length of hospitalizations, and variability in hospital care. In Japan, long lengths of stay among multiple sites of care and caregivers are commonplace.

   Electronic health records support communication between inpatient and outpatient providers and enable careplans, guidelines, and best practices to be readily executed. Reduction of variability can lead to lower costs and higher quality.

4. Reduce the number of ambulatory physician visits. Japan has a high number of physician visits compared to other industrialized societies. Electronic health records (EHR) and personal health records (PHR) enable patient communication, self-management programs, and patient education to occur without the need for an office visit.

5. Reduce the number of high-cost imaging studies. In addition to increasing costs, over ordering of imaging studies results in significant accumulated radiation exposure to patients. Decision support tools in electronic health record ordering systems optimize the right study and lifetime radiation exposure based on evidence.

6. Reduce the high number of prescriptions per patient. E-prescribing would result in the right dose of the right medicine for the right patient with a minimum of therapeutic duplications and drug/drug interactions and so would reduce total costs for medications.

Additionally, creating health information exchanges and a nationwide emergency care record would, as discussed below, reduce redundant and unnecessary care in general. Health information exchanges, enhanced decision support, and ultimately changes in reimbursement will aid Japan in achieving the triple aim of improving the experience of care, improving the health of populations, and reducing per capita costs of health care.[3]

---

[3] Donald M. Berwick, Thomas W. Nolan and John Whittington, "The Triple Aim: Care, Health, and Cost," *Health Affairs* 27, no. 3 (2008): 759–69.

Similarities between the U.S. and Japanese Healthcare Systems

There is no question that Japan does many things in healthcare very well. In Japan, there is universal coverage, long life expectancy, and low healthcare cost per capita as compared to many other industrialized countries, including the United States.

The Unites States has more than 40 million uninsured; life expectancy that is negatively influenced by high rates of obesity, diabetes, and tobacco use; and very high costs per capita. It may appear that the U.S. healthcare system is quite dissimilar from Japan's. However, many features of the two systems, and their challenges, are the same.

The similar challenges include:

1. The United States has multiple health insurers, similar to Japanese system.

2. The United States has a fee-for-service payment system, similar to Japan.

3. The United States has thousands of independent hospitals and physicians in small groups, similar to Japan.

4. The United States has great concerns about patient privacy with high use of IT in some hospital centers of excellence but great variability among hospitals and generally poor adoption of electronic health records by physicians and in ambulatory practices.

5. The United States had the experience in New Orleans with Hurricane Katrina, which led to devastating floods, loss of life, and challenges for healthcare delivery systems. The United States implemented novel healthcare IT programs with new approaches to privacy in the aftermath of Katrina, a situation similar to that presented in Tohoku.

6. The United States has a long history of making changes to health insurance and the health services system.

7. The United States has well-funded health services research to study the healthcare financing and delivery system at many universities and institutes.

Based on these similarities, it is likely that Japan could benefit from some of the lessons that the United States has learned from efforts to implement healthcare IT over the past 30 years.

U.S. Experience with Health Information Technology

Numerous healthcare institutions in the United States, such as the Kaiser-Permanente Health Plan, the Geisinger Clinic, the Mayo Clinic, Intermountain Healthcare, the U.S. Veterans Administration, Partners Healthcare, and Beth Israel Deaconess Medical Center, have implemented

electronic health records, personal health records, and health information exchanges over the past 30 years with positive results.[4]

Coordination of U.S. national efforts began in April 2004, when President George W. Bush called for the majority of Americans to have interoperable electronic health records within 10 years and signed a Presidential Executive Order establishing the Office of the National Coordinator for Health Information Technology (ONC). The national coordinator was charged with developing, maintaining, and overseeing a strategic plan to guide nationwide adoption of health information technology in both the public and private sectors.

Health and Human Services Secretary Michael Leavitt then established and chaired the American Health Information Community to serve as a kind of board of directors for the national healthcare IT effort, setting priorities for ONC.

ONC created and funded two organizations to support its efforts, the Health Information Technology Standards Panel (HITSP) to harmonize data standards, and the Certification Commission for Health Information Technology (CCHIT) to test and validate EHR products for conformance with the functional requirements necessary to support national goals.

Although the George W. Bush administration's healthcare IT efforts created a sense of importance, a strategic plan, and forward progress on policy and technology efforts, little funding was allocated to national implementation of healthcare IT through the end of 2008.

One of the Barack Obama administration's first activities when it took office in January 2009 was the passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act, which allocated $27 billion for a national healthcare IT adoption effort—$2 billion for specific programs to accelerate health information technology (HIT) adoption and $25 billion in stimulus payments to hospitals and providers from the national Medicare health insurance program to incentivize the rapid adoption of healthcare IT.

The Obama administration replaced the earlier committee with a federal advisory committee, the HIT Policy Committee, supplemented by a Privacy and Security Tiger Team to address privacy-specific policy concerns. It also replaced the earlier HITSP with a federal advisory committee, the HIT Standards Committee, and a multi-stakeholder process called the Standards and Interoperability Framework.

Following the enactment of the HITECH Act, two important regulations were issued that outlined the timeline and requirements for spending the $27 billion quickly and wisely.

---

[4] See John Halamka et al., "Health Care IT Collaboration in Massachusetts: The Experience of Creating Regional Connectivity," *Journal of the American Medical Informatics Association* 12, no. 6 (December 2005): 596–601; John Halamka et al., "E-Prescribing Collaboration in Massachusetts: Early Experiences from Regional Prescribing Projects," *Journal of the American Medical Informatics Association* 13, no. 3 (May-June 2006): 239–44; and John Halamka et al., "Early Experiences with Personal Health Records," *Journal of the American Medical Informatics Association* 15, no. 1 (January-February 2008): 1–7.

The Center for Medicare and Medicaid Services (CMS) issued the Meaningful Use Final Rule, which outlined the criteria that each hospital and provider needed to fulfill before qualifying for stimulus payments.

Meaningful Use is not a purchasing program for hardware and software. Instead, it is a policy framework that outlines specific measurable processes and outcomes that define the appropriate use of an electronic health record. These include:

1. Improving quality, safety, efficiency, and reducing health disparities;

2. Engaging patients and families in their health care;

3. Improving care coordination;

4. Improving population and public health; and

5. Ensuring adequate privacy and security protections for personal health information.

The Meaningful Use program includes three stages beginning in 2011, 2013, and 2015, respectively.

As of summer 2011, numerous hospitals and providers have already achieved Stage 1 of Meaningful Use and have received stimulus payments—an initial payment of $2 million per hospital and up to $18,000 per provider.[5]

To achieve Meaningful Use, hospitals and providers must use a certified electronic health record, which includes all the features and functions necessary to achieve national policy goals. This certification is done via Authorized Testing and Certification Bodies (ATCBs) and is quite rigorous.

Software may be certified to perform a subset of the certification criteria (modular certification) enabling users to combine several certified modules to achieve the complete certification feature set. Software can be vendor based or self-developed. Special certification programs are available to hospitals that want to certify that the combination of built and bought software at their site contains the necessary functionality to achieve the policy goals.

Certification also includes interoperability standards for e-prescribing, lab, public health reporting, summary exchange, and clinical documentation. The certification process includes testing implementation of content, vocabulary, and security standards to ensure interoperability.

In addition to these regulations, ONC spent $2 billion on training new healthcare IT professionals and building IT infrastructure to accelerate electronic health record adoption. The activities supported included:

1. $643 million for implementation assistance at the regional level;

2. $564 million for regional health information exchanges;

---

[5] David Blumenthal, "Launching HITECH," *New England Journal of Medicine* 362, no. 5 (February 2010): 382–85.

3. $118 million for workforce development;

4. $60 million for advanced research projects;

5. $64.3 million for nationwide standards, data use agreements, and infrastructure to support a federated network for data exchange; and

6. $235 million to 17 cities for healthcare policy and technology demonstration projects.

The combination of policy, incentives, standards, implementation guidance, and healthcare information exchange has caused a major industry shift. Virtually all healthcare IT vendors have modified their products to comply with certification criteria, and EHR adoption rates are accelerating. For example, in Massachusetts, EHR adoption by physicians will increase from 40 percent in 2008 to 70 percent by the end of 2011.[6]

There has been significant debate about the impact of electronic health records on cost, quality, and safety.

Cost savings can take many forms: reduction in labor, savings in time, avoidance of error, elimination of duplication, and adherence to guidelines resulting in less waste. The Health Information Management Systems Society (HIMSS) has collected numerous case studies of the benefits of electronic health records in achieving such cost reductions, which are available on the society's website.[7]

Of all the benefits of EHRs, one of the most frequently studied is e-prescribing. By enforcing formularies, checking drug interactions, routing medications from the provider to the pharmacy without handwriting or paper, and automating the refill process, e-prescribing achieves substantial savings.[8] E-prescribing is currently illegal in Japan. Given that substantial reductions in costs and significant improvements in safety are possible with the use of e-prescribing, this policy should be reviewed.

EHRs support care coordination, quality measurement, and decision support that results in the right care (neither too much nor too little) at the right time, enhancing patient wellness. A recent review of all the literature shows that 92 percent of studies in the literature demonstrate a positive impact on quality, safety, and efficiency once electronic health records are implemented.[9]

---

[6] See John Halamka, "Making Smart Investments in Health Information Technology: Core Principles," *Health Affairs* 28, no. 2 (March-April 2009): 385–89.

[7] HIMSS Electronic Health Records Association, *The Value of Electronic Health Records* (Chicago: HIMSS, 2009), http://www.himssehra.org/docs/EHRA_Benefits_032309.pdf.

[8] See Michael A. Fischer et al., "Effect of Electronic Prescribing with Formulary Decision Support on Medication Use and Cost," *Archives of Internal Medicine* 168, no. 22 (December 2008): 2433–39.

[9] Melinda Beeuwkes Buntin et al., "The Benefits of Health Information Technology: A Review of the Recent Literature Shows Predominantly Positive Results," *Health Affairs* 30, no. 3 (March 2011): 464–71.

Lessons from the U.S. Experience for Japan

The United States and Japan share many of the same challenges, and the U.S. EHR experience thus far has resulted in quality, safety, and efficiency improvements.

Below, we recommend three phases, a set of specific strategies, and detailed tactics for the development and implementation of a national healthcare IT program in Japan.

Phasing

Just as meaningful use in the United States was divided into three phases, the Japanese healthcare IT program could be divided into three phases.

Phase 1: Create the minimal necessary policy and technology to support patients, providers, and government during a natural disaster, something that stakeholders will feel an urgency to do as the memories of the earthquake are fresh.

Phase 2: Provide the EHRs and healthcare information exchange necessary to support the chronic care of displaced patients as temporary housing/clinics are rebuilt.

Phase 3: Use fully deployed EHRs, PHRs, and health information exchanges to coordinate care of the aging society, support public health goals, and improve safety, quality, and efficiency.

Strategy

Just as the U.S. healthcare IT program was composed of policy, technology, and incentives, so should be the Japanese approach.

Five key strategy elements that Japan could utilize include:

1. Set policy goals. Incorporating lessons learned from the three disasters, there are likely to be policy imperatives to create local, regional, and national functionality in support of care coordination during the acute phase of response to natural disasters and in the medium term as rebuilding begins.

2. Certify technology that is good enough. Government programs should include a detailed list of technology requirements. Although it is not likely that a single EHR product will be implemented at a prefecture or national level, it is possible to constrain the heterogeneity that will occur if hospitals and providers are allowed to implement anything they wish. By providing a list of the required functionality, a baseline for EHR product quality is established, and interoperability is enhanced by the requirement to use specific data standards.

3. Offer incentives for achieving policy goals through adoption of technology. Rather than pay for technology, Japan should offer payments for hospitals and providers once they achieve policy goals. These payments should not cover the entire cost of implementation, but should be large enough to motivate stakeholders to rapidly implement technology and change behavior.

4. Develop uniform privacy and security guidance. Just as Katrina enabled U.S. stakeholders to develop a policy that allowed access to emergency care records by any licensed provider or pharmacist, Japan is likely to be able to develop special policies for the Tohoku region and other sites that may be affected by natural disasters.

   For other types of care, such as standard care coordination, Japan already has successful examples of privacy policies that work. At the University of Kyoto, Dr. Hiroyuki Yoshihara and colleagues have implemented a web-based consent infrastructure that enables patients to authorize disclosure of medical information among specific healthcare organizations in Kyoto.[10]

5. Create an expectation that healthcare information exchange will occur at each transition of care. For patients to understand their own problems, medications, and care plans, they should be given a copy of a care summary at each visit. A summary should be sent to their other caregivers so that transitions are coordinated.

   If such communication among patients and providers becomes an expectation, patients will demand that the policy and technology be created to reduce barriers to data exchange.

Tactics

Just as the United States created multi-stakeholder committees, developed regulations, and established implementation organizations, so should the Japanese.

Five key tactics include:

1. Create a multi-stakeholder policy committee to develop priorities and advise regulatory change. The work of this policy committee will also lead to the development of a national healthcare IT strategic plan. Key decisions include the minimal functionality for the electronic health record, what data to exchange, what databases should be centralized (emergency care database, quality measurement, research databases), and the possible need for a national healthcare identifier in Japan to correctly identify patients as information is exchanged and aggregated.[11]

2. Create a multi-stakeholder technology committee to make standards and security recommendations. Standards are needed for content (what data is sent), vocabulary (the

---

[10] See Jing-song Li et al., "Design and Development of an International Clinical Data Exchange System: The International Layer Function of the Dolphin Project," *Journal of the American Medical Informatics Association*, published electronically May 12, 2011; and Akira Takada et al., "Dolphin Project—Cooperative Regional Clinical System Centered on Clinical Information Center," *Journal of Medical Systems* 29, no. 4 (August 2005): 391–400.

[11] See Richard Hillestad et al., *Identity Crisis: An Examination of the Costs and Benefits of a Unique Patient Identifier for the U.S. Health Care System* (Santa Monica, CA: RAND Health, 2008), http://www.rand.org/pubs/monographs/2008/RAND_MG753.pdf.

meaning of the data sent), and security (ensuring data arrives to the recipient without being read or modified).

3. Establish regional EHR implementation organizations. There is likely great variation in EHR expertise among prefectures in Japan. Prefectures are unlikely to have funding to hire their own experts. National funding for regional implementation organizations will accelerate adoption by ensuring that experts are available to every locality.

4. Establish regional health information exchange organizations. Just as with EHRs, there is likely great variation in experience exchanging data, creating databases, and implementing security technology. National funding for regional health information exchanges will result in data flowing to meet the critical needs of local stakeholders. These organizations can also disseminate success stories from existing health information implementations in other prefectures.

5. Protect privacy. Given the Japanese concern about the privacy of medical data, it is critical that all local implementations respect patient privacy preferences.

   Although the goal should be consistent national policy, in the short term there may be local variation in privacy approaches. For example, some states in the United States exchange data until the patient opts out. Others do not begin exchanging data until the patient opts in.

   As discussed above, special regulatory relief should be considered for Tohoku, where the benefits of care coordination outweigh privacy risks in the short term. Of course, personal health records, as described above, enable the patient to control their own data flows, and thus PHRs can be used immediately before privacy policy and regulations are finalized.

Implementation

The United States chose a much accelerated approach to implementation. As with all projects, there is a relationship between scope, time, and resources. To achieve large scope in short time, significant resources are needed. Japan may wish to phase its implementation.

Three possible approaches to phasing include:

1. Do not "rip and replace" existing successful systems; instead focus on achieving broad functionality for as many caregivers in a local area as possible. Experience in countries like the United Kingdom has illustrated that it is often better to move forward rapidly with what is possible at the local level rather than attempt to provide a single centralized set of applications.

   If existing applications are good enough, leave them in place and require only that they send and receive data as is needed for care coordination, quality measurement, and patient engagement. In the short term, it is more important that systems function well in local settings (i.e., coordinating care within Tohoku is more important than coordinating care between Hokkaido and Tohoku).

2. *Encourage personal health records for patients who want to use them.* PHRs provide a simple way for patients to maintain their own problem lists, medication lists, allergy lists, laboratory results, and key healthcare preference information (consents, advanced directives, healthcare proxies) on a website or cell phone.

   Some percentage of the population (in the United States, it is about 20 percent) is willing to maintain such systems and serve as the steward of their own healthcare data while EHR and healthcare information exchange infrastructure is being implemented. PHRs are low cost, easy to deploy, and very useful for care coordination in a disaster.

3. Create a national emergency care database from existing data sources and add new data sources in a federated fashion as they become available.

   Just as KatrinaHealth was created in one month's time from existing data sources, Japan should leverage existing administrative databases to create a national emergency care record. Other data sources from electronic health records, private insurance companies, and personal health records can be added as they become available. Likely, Japan can very quickly create a web-accessible database that is secure enough for use in natural disasters for all those patients 65 and older enrolled in national health programs.

The Tohoku Region as a Catalyst for Health IT Development

The triple disaster in the Tohoku region may provide a catalyst to begin a major healthcare IT program in Japan, in coordination with the rebuilding of the healthcare infrastructure in Tohoku.

The health and healthcare effects of the great earthquake will be felt for years. First came the initial physical and emotional trauma of the event. Then came the stress, sleeplessness, and depression of the aftermath. Those with chronic diseases have been at increased risk for decompensation due to changes in diet (high sodium), decrease in activity, and disruption of their care plans.

Paper medical records were destroyed. Medication lists have been hard to reconstruct, especially among the elderly who may not know the names and manufacturers of their medications. Walkers, canes, and other devices supporting mobility were lost.

From March 11, 2011, through summer 2011, the acute response, both domestic and international, has provided for the immediate healthcare needs of 140,000 patients displaced from their homes, their jobs, and their families into 400 recovery centers.

The Japanese government has committed to construct temporary housing and adjacent temporary clinics by Obon on August 15, 2011.

All of this recovery requires substantial investment. Once the recovery phase is complete, additional investments will be needed to support the chronic care of displaced elders.

New government funds for healthcare in the Tohoku region will be challenging to provide. Japan has experienced slow economic growth over the past decade accompanied by slow growth in tax

revenue. Disaster recovery costs, coupled with a decrease in consumer spending, will further constrain economic growth and available resources.

There are few policy levers available. The strategic implementation of healthcare IT in the Tohoku region is one tactic that could address both the short-term recovery challenges in the region and demonstrate an approach to the longer-term national challenges of an aging society by reducing healthcare costs, improving quality, and enhancing safety.

In the United States, a similar event occurred in August 2005, shortly after the initiation of this national healthcare IT planning efforts, when Hurricane Katrina made landfall on the Louisiana coast at New Orleans. Levees were breached and widespread flooding created the worst national disaster in U.S. history.

To support the healthcare needs of victims and evacuees in the New Orleans region, a public/private partnership involving ONC, the Markle Foundation, Gold Standard, Surescripts/RxHub, and the American Medical Association established KatrinaHealth.org which provided physicians and pharmacists treating Hurricane Katrina evacuees with access to patients' prescription drug and dosage information, so that medications could be renewed and potential medication errors avoided. The project was started in September 2005 and went live in October 2005—one month from idea to production.

KatrinaHealth.org allowed authorized health professionals (actively licensed U.S. physicians and pharmacists) to access an evacuee's medication history from three sources: Louisiana and Mississippi Medicaid health insurance; local commercial pharmacies; and health insurance pharmacy benefit managers.

The Katrina healthcare experience demonstrated the power of healthcare IT to assist patients and providers during a natural disaster.[12] Novel privacy policies were tested and put into production given the urgency of getting information to caregivers in the aftermath of the disaster.

Conclusion

Given the financial imperative to enhance healthcare efficiency as Japanese society ages, together with urgency created by the Tohoku disaster, now is the time to accelerate healthcare IT implementation in Japan.

Policy goals must be set based on the input of multi-stakeholder guiding groups. Technology functionality and standards are foundational to interoperability. Funding in the form of stimulus once implementations are completed and policy goals achieved has worked very well in the United States and minimizes the upfront investment by the government. Enabling prefectures and

---

[12] See Victoria D. Weisfeld, "Lessons from KatrinaHealth," Markle Foundation, New York, NY, June 13, 2006, http://katrinahealth.org/katrinahealth.final.pdf.

healthcare providers in Tohoku to rapidly implement new approaches to healthcare IT policies and systems could provide important lessons for all of Japan.

The end result of this effort will be increases in efficiency quality and safety of healthcare while also preparing Japan for future natural disasters.

Japan could continue this dialog on the development of healthcare IT by including U.S. experts in its working groups as electronic health record policy and technology decisions are made. By working together, the two nations will more rapidly disseminate lessons learned, leverage policy experiences, and share implementation tools.

The healthcare challenges faced by Japan are more similar than different to those that are the focus of the current $27-billion U.S. effort. Now is the time to begin to address them together.

CSIS | CENTER FOR STRATEGIC & INTERNATIONAL STUDIES