

2016 Top Markets Report **Health IT** Country Case Study

Japan

Japan ranked among the top countries in this Health IT Top Market Report, with a favorable demographic profile, a largely urbanized population and sizable current market, coupled with significant ICT and healthcare investments in place. Challenges remain for U.S. Health IT companies doing business in Japan, including a lack of specific Health IT policies and involvement of many government agencies overseeing the sector, leading to areas of policy fragmentation.

Overall Rank

9

Description of Rank and Sub-score Measurements

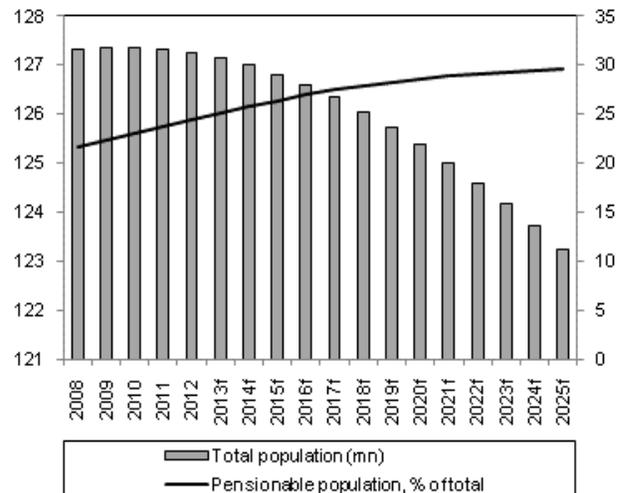
Japan continues to rank among the top export prospects in this Health IT Top Market Report (NOTE: the methodology used to rank countries has changed from the 2015 Report, so rankings are not directly comparable between years), and rates highly on most metrics. For instance, Japan has the third highest GDP level globally (behind only the United States and China), a large Health IT market size (around \$4 billion), a significantly aging population, a high concentration of population clustered in urban areas, and a tech-friendly society. All of these factors indicate that Health IT already has a good foundation in Japan, with the potential for more growth. Japan did rate a bit lower compared with other countries in several new metrics used in this Report (including a shorter life expectancy once a patient becomes ill and less financial support of the elderly), which, along with some policy concerns, resulted in a lower overall rating.

Opportunities for U.S. Companies

The government's plans to revamp healthcare services are unsurprising given Japan's demographics. In 2015, the over-65 population represented 26.5 percent of Japan's population and notably increased in size by 2.9 percent, while the 0-

14 and 15-64 segments each declined (by 0.9 and 1.2 percent respectively) from 2014.¹ The over-65 proportion is projected to reach 36 percent by 2050 (see Figure 6 for data through 2025). A noteworthy side effect of this trend is that the aging of Japan's population also affects the demographics of the caregivers themselves; a study by PLOS One indicated that Japanese doctors aged 60 and over will rise from 20 percent in 2010 to 36 percent by

Figure 6: Ageing, Contracting Population
Japan Demographics
Percentage of Total Population (RHS), 2011-2025



f = BMI forecast. Source: BMI, World Bank, UN

2035, and a separate 2012 MHLW study indicated that older doctors on average work fewer hours than younger ones.ⁱⁱ

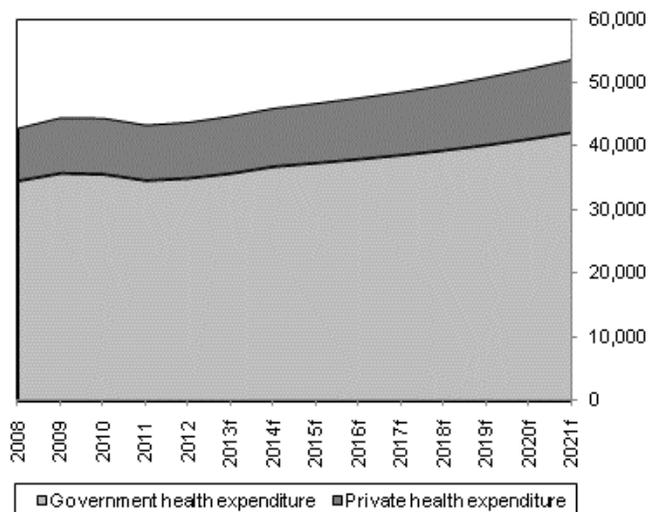
As a population ages, the burden of non-communicable diseases becomes much greater than that for communicable diseases. These often-chronic diseases (cardiovascular and metabolic disorders, cancer, diabetes, Alzheimer's disease and other mental health problems) normally require prolonged treatment. An increased focus on home care (including mobile health and telehealth) will decrease the country's reliance on hospitals, allowing patients to receive proper care from home and leaving sufficient beds in hospitals for more urgent cases, and also provide opportunities for U.S. companies to offer home-based treatment options. MHLW statistics from 2011 noted that Japanese patients 65 and over accounted for 68 percent of daily in-patient visits and 46 percent of outpatient visits.ⁱⁱⁱ

Despite the Japanese government's best attempts, the financial burden of providing generous healthcare benefits for the population is unsustainable, especially in a slow-growth, developed market (see Figure 7).^{iv} In 2014, government healthcare expenditure reached USD 474 billion, leading to government initiatives to reduce total expenditure on healthcare.^v As a result, private sector healthcare provision in Japan (through improved home care and community-based care, aided by mobile health and telehealth solutions) will likely need to become a greater proportion of treatment services, particularly for the elderly population. Such treatment solutions also will likely result in improved population health and analytical data about the overall condition of Japanese patients.

A variety of U.S. Health IT companies have expressed interest in the Japanese market in recent years. Companies with a wide range of products/services to offer (including nurse call systems, administrative claims and data exchange technologies) have approached U.S. Commercial Service Tokyo for assistance, and large, multinational companies (such as GE Healthcare, IBM and Apple) also have a presence in the market.

The American Chamber of Commerce-Japan (ACCJ) is a key stakeholder driving interest in Health IT

Figure 7: High Government Expenditure
Japan Health Expenditure by Sector (JPYbn)



f = BMI forecast. Source: BMI, WHO1

between the U.S. and Japanese governments. In February 2014, the ACCJ issued the report “Utilizing Telemedicine to Deliver More Efficient and Effective Healthcare in Japan,” which contained the following recommendations:

- Revise Article 20 of the Medical Law (referenced below), particularly clarifying who can practice telemedicine and broaden the scope of practitioners beyond medical doctors;
- Clearly define reimbursement qualifications and expand the number of telemedicine services eligible for reimbursement;
- Speed up the implementation of the “Dokodemo MY Byouin (My Hospital Everywhere) Project and complete and implement the “National ID” or “Common ID” number system (note: now called the “My Number” system, shown below under “Challenges”) as soon as possible;
- Continue efforts and create incentives to increase Electronic Healthcare Record use to 50 percent or more within three years, and encourage greater data interoperability between medical facilities;
- Harmonize privacy and personal information rules among competent government bodies for use of “big data” and analytics in cloud computing environments;
- Introduce a policy framework that promotes delivery of telehealth services and supports companies willing to invest and develop new business models in this emerging sector,

including improving coordination across the various ministries involved in regulating the sector; and

- Implement existing global telehealth standards and assume a leadership role in the ongoing development of future global standards.

In 2013, the American Health Information Management Association (AHIMA), through a project supported by the International Trade Administration, launched an effort to develop a global health information management curriculum to instruct new entrants to Health IT (students and those switching careers), as well as career healthcare workers, on appropriate governance and data analysis techniques. This initiative involves education and workforce experts from countries worldwide, including Yukiko Yokobori of the Japan Hospital Association. The curriculum was finalized in mid-2015, and is now being rolled out worldwide. Countries such as India, Nigeria and Saudi Arabia have already committed to adopting the curriculum and will begin instruction shortly. Japan would significantly benefit by being an early adopter of the finalized curriculum and introducing the coursework into universities and professional development institutions to educate their workforce and increase adoption of Health IT technologies. With a healthcare workforce of more than 300,000 physicians, over 1 million nurses and more than 280,000 pharmacists,^{vi} increasing the capacity and knowledge of Japan's workforce on how to appropriately and efficiently use Health IT appears to be a sound investment.

Japanese and U.S. government and private sector representatives have engaged in a series of meetings in recent years, forming a good foundation for future discussions. These include the following:

- A 2013 week-long interagency delegation visit to Japan by representatives from HHS (Office of National Coordinator—ONC), Veterans Administration, International Trade Administration and National Institute of Standards and Technology. The visit included meetings with Japanese ministries (MHLW, METI, MIC, and MOFA; acronyms spelled out below), as well as industry, academic and trade association officials (more details on this trip below);

- The 2013 and 2014 meetings of the U.S.-Japan Internet Economy Dialogue, which singled out healthcare as one of the major areas of potential cooperation;
- A September 2014 meeting in Washington including U.S. government, Keidanren, ACCJ and industry trade associations (HIMSS and TIA);
- U.S. government meetings with representatives of the Japanese Association of Healthcare Information Systems Industry (JAHIS) at HIMSS Annual Conference, 2013 and 2014;
- Meetings with Japanese Embassy in 2013 and 2014; and
- Meeting between Government of Japan Office of IT Secretariat, ONC and Commerce at HIMSS Annual Conference, 2016.

ACCJ and other industry participants identified five possible Health IT areas of cooperation through the U.S.-Japan Internet Economy Dialogue: 1) healthcare data standardization, 2) healthcare big data and data utilization, 3) privacy and security, 4) how IT plays a role in National Health Insurance, and 5) preventative care and IT.

Some follow-up opportunities identified during the September 2013 U.S. delegation visit included:

- Addressing the shortage of Health IT workers in Japan;
- Advising Japan on efforts to standardize data exchange (such as the "SS-Mix" system);
- Meet with city and local government officials leading the effort on piloting new Health IT products and services (may include Shimane, Kanagawa and Okayama prefectures);
- Focus on disease prevention, rather than treatment of chronic disease;
- METI interest in supporting private sector initiatives;
- Education of Japanese officials on lessons learned from U.S. Health IT rollout;
- Encourage increased Japanese involvement and activity with international Health IT standards-setting bodies; and
- Discuss transition of Health IT pilot projects in Japan to long-term sustainability.

Challenges in the Market

The regulatory environment represents one important challenge to consider when evaluating

Health IT market opportunities in Japan. At present, multiple ministries play distinct roles in the oversight of Health IT:

- Ministry of Health, Labour and Welfare (MHLW) leads on pharmaceuticals, medical devices, promotion of health products and home healthcare;
- Ministry of Economy, Trade and Industry (METI) has the lead in Health IT services and commercial engagement;
- Ministry of Information and Communication (MIC) leads on telecom policy, privacy and open data;
- Consumer Affairs Agency leads on protection of personal information, with the above agencies and the Ministry of Internal Affairs and Communications providing guidance on regulations; and
- Ministry of Education, Culture, Sports, Science and Technology (MEXT) oversees university hospitals.

One example of the overlapping responsibilities relates to privacy and protection of personal information, as provisions vary among government agencies, and local governments may also impose rules. As a result, this creates challenges for Health IT companies (particularly those in cloud computing and data analytics).

Since no agency has a clear lead role in overseeing all aspects of Health IT, and significant areas of the sector (such as data storage and patient-oriented health) are not currently governed by rules and regulations, the result is regulatory and policy fragmentation, resulting in uncertainty regarding the rules U.S.-based companies will confront when entering the market. For example, in early 2015, the Japanese Diet undertook a review of the Personal Information Protection Law, which led to the introduction of the “My Number” system later in the year. The “My Number” system provided all Japanese citizens with a Social Security/tax identification number, but the system currently is used only for immunization records and health check information in relation to healthcare and treatment. Other health information has been kept separate from “My Number” due to privacy concerns. There has been discussion that another system will be created to handle medical information, but no decisions have been made on that topic as of May

2016. A separate system will possibly create system integration challenges to commercial and public health efforts to take full advantage of sharing information and basing treatment decisions on a complete record of a patient’s health condition, posing commercial challenges to U.S. companies. As of January 1, 2016, a new agency (the Personal Information Protection Commission) was established to handle personal information including the “My Number” system. Regulations currently are also in effect regarding mobile technologies and population health.

Another factor that could inhibit increased uptake of Health IT in Japan is the lack of Chief Information Officers (CIOs), Chief Medical Officers (CMOs) and Chief Medical Information Officers (CMIOs) at most hospitals. In the United States, CIOs, CMOs and CMIOs are often integral players in decision-making regarding the purchase of, and need for, health information systems and often serve as an advocate for purchasing integrated systems. In Japan, often there is no hospital point-of-contact available (or aware) to advocate for installation of these systems. In addition, most Health IT systems are developed for individual hospitals, not so information can be shared between facilities.

In addition, hospitals usually purchase Health IT in two different ways. Public hospitals publish their own procurements for Health IT products and services, particularly information management systems, and have a lot of autonomy. In contrast, purchasing by national university hospitals falls under MEXT’s purview. The procurement processes used within both sets of hospitals often lack transparency, creating further challenges in finding investment opportunities.

There are several local companies active in the sector. These include Fujitsu and NEC, who are focusing on electronic medical record systems, and Softbank, a leading company in the mobile communication services, devices and software sectors (and also with business partnerships with U.S. Internet company Yahoo! and U.S. telecommunications company Sprint). Other local players include Hitachi, Panasonic and NTT Data. In January 2016, Toshiba announced their Medical Systems unit was for sale, and at the end of March 2016, Canon assumed the rights to Toshiba’s medical equipment business.^{vii}

A fairly strong infrastructure exists for delivering Health IT in Japan, with 3G and 4G systems and high-speed broadband Internet widely available. Japan is a highly urbanized country, and the widespread prevalence of Internet computer connectivity (81.7 percent,^{viii} from the Ministry of Internal Affairs and Communications' Statistics Bureau) may have some impact on mobile health and telehealth deployment in Japan. Mobile phone penetration and Internet usage through phones have steadily increased in recent years,^{ix} indicating that wider implementation of mobile health and telehealth solutions could be used for more consistent collection and measurement of vital health information and associated need to control health costs.

Finally, Article 20 of Japan's Medical Law had been ambiguous regarding the status of telemedicine, but MHLW circulated a notice on August 10, 2015^x which clarified that delivery of telemedicine services in Japan is allowed. This follows release of a March 31, 2011 MHLW ordinance (in the aftermath of the eastern Japan earthquake and tsunami) which "accepted telemedicine under the same conditions as face-to-face treatment."^{xi} Revision of Article 20 was a February 2014 recommendation from the ACCJ (referenced above) to promote the growth of telemedicine in Japan.

ⁱ Statistics Bureau of Japan News Bulletin, January 18, 2016, pp. 4-5.

ⁱⁱ "Japan—Healthcare Sector to Gain from Ageing Profile," Business Monitor International Daily Sector Alert—Pharmaceuticals and Healthcare, December 4, 2015.

ⁱⁱⁱ Ibid.

^{iv} Business Monitor Online - Industry Trend Analysis - Healthcare Costs Rising Despite Cost Cutting Initiatives - September 16 2013.

^v "Japan—Drug Pricing Reforms to Challenge Innovative Drugmakers," Business Monitor International, January 5, 2016.

^{vi} Medical Care Personnel by Prefecture (Based on Survey Data from Physicians, Dentists, and Pharmacists; and the Report of Public Health Administration of Services, 2012, from 2016 Japan Statistical Yearbook, Spreadsheet 24-21.

^{vii} "Canon Reaches Agreement To Buy Toshiba Medical For \$6bn?" Reed Miller, Clinica Daily Alert, March 17, 2016.

^{viii} Communication Usage Trend Survey, December 31, 2013, from 2016 Japan Statistical Yearbook, Spreadsheet 12-2.

^{ix} Number of Subscriptions and Contracts to Information and Communication Services, End of Fiscal Year 2013, from 2016 Japan Statistical Yearbook, Spreadsheet 12-6.

^x <http://www.mhlw.go.jp/file/06-Seisakujouhou-10800000-Iseikyoku/0000094452.pdf>.

^{xi} "Utilizing Telemedicine to Deliver More Efficient and Effective Healthcare in Japan," ACCJ Viewpoint, February 10, 2014, p. 4.