

# 31

## Utilizing Telemedicine to Deliver More Efficient and Effective Healthcare in Japan

### **Situation**

Governments and healthcare providers are under significant pressure to lower the costs of delivering healthcare services. One way to achieve this imperative is to integrate new infrastructure, information systems and emerging technologies that support an increasingly broad healthcare ecosystem. Telemedicine is one such solution.

Telemedicine is a dynamic and important method of delivering healthcare services that holds the potential to benefit the Japanese healthcare community, patients, the government and the broader economy as a whole, by virtue of its ability to enhance traditional medical services and, in some cases, improve access to healthcare in a more affordable way.

Telemedicine is formally defined by the American Telemedicine Association (ATA) as the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status. Telemedicine includes a growing variety of applications and services using two-way video, email, smartphones, wireless tools and other forms of telecommunications technology. Telemedicine encompasses a wide range of remote healthcare services such as patient consultations via video conferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education, consumer-focused wireless applications and nursing call centers, among other applications.”

Benefits derived from telemedicine are numerous and typically fall into one of four categories: (1) enhanced efficiency; (2) improvement in patient satisfaction and Quality of Life (QOL); (3) greater access to healthcare; and (4) contributions to clinical safety and reduction of medical errors.

Although there are few if any objective statistics on the application and delivery of

telemedicine services in Japan or, for that matter, around the world, many experts in the field believe that there is a wide gap between (i) the technological capabilities of Japanese manufacturers and service providers, and the advanced infrastructure within the country and (ii) the utilization of telemedicine amongst healthcare practitioners and patients here in Japan.

### **Current Policy**

The ACCJ and EBC have identified a number of issues that we believe represent obstacles to the growth of telemedicine in Japan, including:

#### **Ambiguity of Article 20 of the Medical Practitioners Act**

The current wording makes no mention of telemedicine and contains language that many legal professionals and academics believe could be interpreted to prohibit telemedicine. The ordinance issued by the Ministry Health, Labour and Welfare (MHLW) on March 31, 2011, shortly after the Great East Japan Earthquake, however, accepted telemedicine under the same conditions as face-to-face treatment.<sup>1</sup> Article 20 thus should be revised in the manner that reflects the MHLW notice and incorporates reference to telemedicine.

#### **Uncertainty as to Who can Implement Telemedicine**

Because no official guidelines for telemedicine exist in Japan, it is unclear who is authorized to implement it. The primary interpretation is that only medical doctors can implement telemedicine, but for the full benefits to be realized, other medical professionals can and should be allowed to participate. Given the shortage of physicians, particularly in rural areas, the MHLW should implement a system that expands the services that nurses, psychiatrists, clinical engineers and other healthcare professionals can provide under a doctor's remote guidance. In the United States, credentialing for telemedicine clearly designates

the persons who can implement specific telemedicine treatments and operate specific devices. Both the government and the medical sector are active in educating, training and monitoring telemedicine practice in U.S. medical institutions.

### **Limitations of the Current Reimbursement System**

Teleradiology, telepathology, telephone consultation, guidance and management for use of a pacemaker and asthma treatment at home (telemonitoring) are some rare examples of telemedicine services whose costs are clearly approved for reimbursement. It is uncertain whether other telemedicine practices qualify for reimbursement or not. This differs greatly in the United States where Medicare protocols clarify which treatments are subject to reimbursement in a simple way by using CPT (Current Procedural Terminology) or HCPCS (Healthcare Common Procedure Coding System) codes. For example, Medicare in the United States accepts the costs of telementoring, guidance and education on diabetes and dialysis treatment in its reimbursement scheme.

Telemedicine is also suitable for health management in ways other than direct treatment, such as for continuous monitoring of a patient's condition, consultation by medical specialists, disease-management, prevention of the worsening of illnesses, and guidance and education for patients. The ACCJ and EBC submit that the costs of these telemedicine practices should also be reimbursed, and that the Japanese government should do more to lower the cost of ongoing monitoring by facilitating utilization of the Internet of Things (IoT) and machine to machine (M2M).

### **Limited utilization of electronic health records (EHR) especially in small and medium sized clinics and hospitals**

During the aftermath of the Tohoku disasters, many believed that had there been an efficient

electronic healthcare record (EHR) system in place, emergency medical care would have been much easier for doctors to deliver and patients to receive. Based on this experience, and as one of the world's leading IT economies, Japan has the potential to innovate and lead the future of healthcare IT globally.

It is estimated that only around 60 percent of large hospitals (over 600 beds) and only 20 percent of all clinics in Japan currently utilize EHR.<sup>2</sup> In addition, many healthcare IT systems in Japan are designed only for individual hospitals, not with the idea of connecting hospitals to function as a component of the broader social infrastructure (i.e., as a secondary "medical region"). EHR allows patient records to be securely shared amongst healthcare practitioners, increasing accuracy, convenience and coordination while reducing the chance of error and lowering costs. Telemedicine and Health Information Exchanges (HIE), along with integrated data from EHR, are at the heart of a "patient-centered team care delivery" model.

### **Limits on data centers and cloud computing services related to healthcare including Big Data**

Cloud computing enables not only large hospitals but also small/medium-size hospitals, clinics, pharmacies and nursing care services to access and utilize Big Data integrated from EHR, HIE and other resources at low cost and as needed. However, rules regarding security, privacy and personal information protection in healthcare often differ by government body (e.g. METI, MHLW, MIC and local governments). As a result, cloud services providers face challenges in meeting each set of requirements. To optimize the merits of big data and analytics in the entire healthcare value chain, it is essential to develop common rules related to privacy and personal information protection, applicable to both the healthcare providers and the cloud services providers, and to fully implement the "National ID" or "Common ID" number system. Cross-border harmonization in the healthcare IT sector is also essential.

## Recommendations

The ACCJ and EBC believe that the government of Japan can and should do more to promote the utilization of telemedicine via a combination of deregulation and economic promotion. This is consistent with Prime Minister Abe's emphasis on the importance of ICT applications in the medical field in Japan's growth strategy. Specifically, the ACCJ and EBC urge the government to:

- Amend Article 20 of the Medical Practitioners Act in a way that defines which telemedicine practices can be accepted under the same conditions as face-to-face treatment and allows medical practitioners to easily understand who can implement telemedicine.
- Clearly define reimbursement qualifications and expand reimbursement to include actions other than direct treatment, including consultation between medical specialists, patient education, disease management and, in particular, monitoring of patients at home. Such bio-data monitoring of patients or the elderly can help those with chronic health conditions, and can also be used to prevent diseases and maintain health — helping to further reduce medical expenditures.
- Lower the cost of ongoing health data monitoring by facilitating the growth and utilization of IoT and M2M by ensuring that service fees charged by the mobile carriers are rationalized.
- Speed up the implementation of the “*Dokodemo MY Byouin*” (My Hospital Everywhere) Project.
- Make further efforts and provide greater incentives to increase electronic health records (EHR) penetration and ensure greater data interoperability.
- Harmonize rules related to privacy and personal information protection among relevant government bodies for utilization of Big Data and healthcare analytics in cloud computing.
- Introduce a policy framework that promotes delivery of telemedicine services and supports companies willing to invest and develop new business models in this emerging sector; improve coordination across the various ministries involved in regulating telemedicine.
- Implement existing global standards and assume a leadership role in the ongoing development of telemedicine's future global standards.

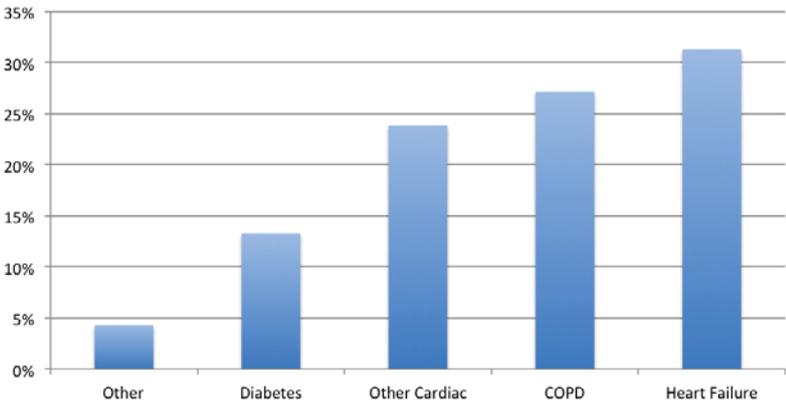
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## References

1. “Although treatment delivered via telemedicine is not the same as face-to-face treatment, telemedicine does not automatically conflict with Article 20 of the Medical Practitioners Act if it enables useful information on the physical and mental condition of patient to be obtained in a sufficiently substitutable manner.”
2. “Kokumin-eisei no doukou,” Health, Labor and Welfare Statistics Association, 2012

# 31. Percentage of Home Care Agencies Using Disease Management Telehealth Programs

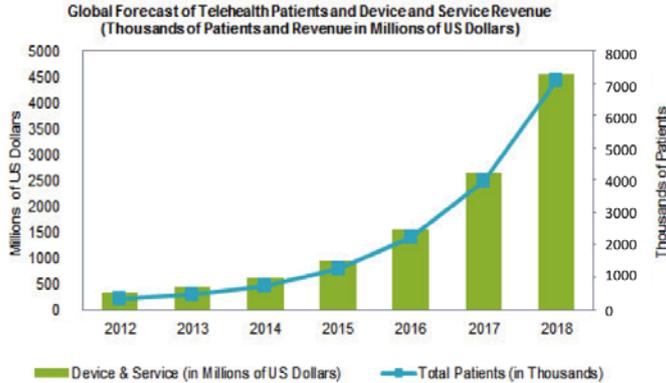
Telehealth is clearly used in the United States to help manage various chronic diseases. The 2014 National State of the Home Care Industry Study included over 1,100 home health agencies of all sizes, all auspices, rural and urban, for-profit and not-for-profit, hospital-based and freestanding. Homecare agencies report that they use their telehealth systems to serve patients with one or more chronic diseases.



Source: National State of the Home Care Industry Study © 2014

# 31. Telehealth Global Forecast

The global telehealth market is expected to grow by more than a factor of 10 from 2013 to 2018, as medical providers increasingly employ remote communications and monitoring technology to reduce costs and improve the quality of care, according to IHS Technology.



Source: IHS Technology, January 2014