Reducing Urban-Rural Medical Gaps

In order to reduce and eventually resolve problems in underpopulated areas and urban-rural medical service discrepancies, we connect with hospitals in rural areas through the telemedicine network and we have established medical systems to provide patients everywhere with advanced medical treatment.

Topics

Project to Support Collaborative Emergency Medicine Using the Cloud

As a part of research conducted by the Ministry of Internal Affairs and Communications, which aims to realize a secure information-sharing model in medical fields using mobile terminals and cloud technology, we started a project to support collaborative emergency medicine using the cloud. In this project, we collaborated with six hospitals in Hokkaido (Japanese Red Cross Kitami Hospital, Hokkaido Prefectural Kitami Hospital, Engraru-Kosei General Hospital, Furano Association Hospital, Fukagawa Municipal Hospital, and Rumoi City Hospital) and our medical specialists, using their smartphones and tablets. We looked at patient information sent to the cloud on the Internet, and offered advice on diagnoses and treatment plans and judged whether ambulance transportation to our hospital was necessary. This has made it possible to provide quicker treatments for patients suffering from heart diseases.

Advancement of International Medical Cooperation

1. Sakhalin Oblast (Russia)

Since Akitoshi Yoshida, the president of our university, visited the Sakhalin Oblast and the Northern Territories (part of the Kuril Islands in the oblast) as the medical field inspector of the public-private investigation team for Japan-Russia joint economic activities, the exchange between our university and the Sakhalin Oblast has become more active. On October 22nd, 2017, we concluded an MOU with the oblast. This resulted in Asahikawa and Yuzhno-Sakhalinsk in the Sakhalin Oblast becoming sister cities regarding the mutual cooperation of telemedicine.

On November 21st, a group of municipal assembly members of Yuzhno-Sakhalinsk visited the Telemedicine Center of our university, and on December 1st, the center welcomed another group of government delegates including the vice-president and the health minister of the oblast. Both groups showed a strong interest in President Yoshida’s demonstration of telemedicine and cloud-based medicine, discussing and exchanging ideas regarding their effective use in the Sakhalin Oblast.

2. Parkway Pantai, Ltd., in Singapore

On April 3rd, 2018, we concluded an MOU regarding telemedical activities with Parkway Pantani, Ltd., a subsidiary of IHH Healthcare Berhad, one of the largest private hospitals in Asia that operates hospitals in Singapore, Malaysia, India, China, Hong Kong, Brunei, and the United Arab Emirates. We will collaborate with Parkway Pantani, Ltd., in applying our telemedical technologies internationally and will provide doctors and nurses in Asia with clinical training opportunities.
### Activities in Telemedicine

**As of May 1, 2018**

- **50 domestic facilities**
- **4 international facilities**

<table>
<thead>
<tr>
<th>Classification</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medical Examination Support</td>
<td>637</td>
<td>848</td>
<td>706</td>
</tr>
<tr>
<td>Radiograph Image Diagnosis</td>
<td>5,200</td>
<td>5,623</td>
<td>5,602</td>
</tr>
<tr>
<td>Pathological Image Diagnosis</td>
<td>18</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,855</td>
<td>6,492</td>
<td>6,323</td>
</tr>
</tbody>
</table>

### History

- **1994 Oct.** First Telemedicine is conducted between Asahikawa Medical University and Yoichi Society Hospital with the cooperation of Sony
- **1996 May** Harvard University, Professor Charles L. Schepens visits Asahikawa Medical University to observe experiments in telemedicine
- **Dec.** Commencement of telemedicine between Asahikawa Medical University and Harvard University SERI
- **1998 Oct.** Commencement of telemedicine between Nanking Central Medical University Ophthalmology Department, China and Asahikawa Medical University
- **1999 July** The Telemedicine Center is completed
- **2001 Feb.** First experiments in the transmission of 3D moving images in 3D-HD (three dimensional-high definition moving images)
- **2005 Jan.** Advances in IP for Telemedicine Centers
  - **May** Research commenced for telemedicine using the Asia-Broadband Network (ABB)
  - **Commencement of telemedicine using satellite networks**
- **2007 Feb.** Commencement of outpatient care for ophthalmology patients—Telemedicine House Calls
  - **Mar.** Successfully held the Virtual Ophthalmology Symposium connecting Japan, Singapore, and Thailand with ABB, while conducting live-surgery transmitting moving images for simultaneous viewing between the three countries
- **2009 Jan.** Selected as a Telemedicine Model Project by the Ministry of Internal Affairs and Communications and commenced promotion of telemedicine
  - **Dec.** Commencement of PHR (Personal Health Record) service called Well-Net-Link
- **2011 May** Conclusion of the China and Japan Telemedicine Project Grant Aid Agreement with the Ministry of Health of the People’s Republic of China
- **2012 Mar.** Establishment of the Telemedicine Cloud Center
  - **May** Commencement of operations support and technical guidance to 4 hospitals including on the basis of the China and Japan Telemedicine Project Grant Aid Agreement
- **2015 Mar.** Commencement of the web meeting service to promote telemedicine
- **2016 Mar.** Commencement of meetings with four home-nursing offices in Hokkaido considering case studies on integrated community care using web conference service
  - **Oct.** Commencement of project to support collaborative emergency medicine using the cloud (with six hospitals in Hokkaido)
- **2017 Aug.** Conclusion of an MOU with the Sakhalin Oblast in Russia regarding telemedicine
  - **Nov.** A group of municipal assembly members from Yuzhno-Sakhalinsk visit the Telemedicine Center
  - **Dec.** A group of government delegates from Sakhalin Oblast, including the vice-president and the health minister, visit the Telemedicine Center
- **2018 Apr.** Conclusion of an MOU regarding telemedicine with Parkway Pantani, Ltd., a subsidiary of IHH Healthcare Berhad, one of the largest private hospitals in Asia

### Hokkaido Medical Museum in 2017-2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 May 23</td>
<td>To Understand the Results of a Medical Examination</td>
</tr>
<tr>
<td>2017 July 12</td>
<td>Never Too Late: Prevention of Lifestyle-related Illnesses Such as Diabetes</td>
</tr>
<tr>
<td>2017 Sep. 8</td>
<td>Osteoporosis and Its Prevention</td>
</tr>
<tr>
<td>2017 Nov. 16</td>
<td>Lifestyle to Avoid Dementia</td>
</tr>
<tr>
<td>2018 Jan. 16</td>
<td>Lifestyle to Avoid Hypertension</td>
</tr>
<tr>
<td>2018 Mar. 6</td>
<td>Menopause</td>
</tr>
</tbody>
</table>