Health Informatics in Japan, Update, 2008–2009

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1. Update 2008–2009

Like other countries, the economic stimulus package in Japan is including healthcare delivery support. For the health informatics domain, there are two large subsidies proposed. One is to provide "the last one mile" optic fiber network to all hospitals in Japan. We have about 9000 hospitals nationwide, and some very local hospitals only have a slower network infrastructure. The other is to support regional healthcare allies, for the regional core hospitals to help more local hospitals' activities. Many applicants are proposing various aspects of healthcare. Some plan prenatal period information sharing, others offer image examination remote reading. Outcomes of these projects are anticipated in reports in the future.

In Japan, CPOE (Physician's Order Entry System) is very popular. More than 80% of large hospitals (with 400+ beds) have CPOE. About 25% have EMR (electronic medical record). Medical errors have come out in the open in recent years, therefore to cope with very crowded hospital/clinic situations and lack of medical staff, Japanese hospitals have used CPOE to make orders and messages promptly delivered to destination departments. University hospitals are now experiencing forth replacement/upgrade of CPOE. From accumulated experience through the years, three of four papers in this Japan issue are based on data acquired from operation, transaction, and planning of CPOE.

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As CPOE is popular in Japan, so is the standardized export of data prevailing also. Since 2006, through two large Ministry projects to promote standardized export of data in HL7 and DICOM format, two top HIS vendors (Fujitsu and NEC) are shipping HL7 conformant HIS. With other conformant vendor products, around 50% of large hospitals have HL7 and DICOM export features. We are headed for the secondary use of clinical data. Pros have already been told; regional health network, provider management planning, health policy planning, clinical research , etc. However, we must have crisp guidelines for the protection of patient privacy. As high-speed, high-level searching tools become available, the guidelines we now have (like HIPAA) will soon become outdated.

2. Paper from JAMI Spring Conference 2008

On May 30–31, 2008, JAMI (Japan Association for Medical Informatics) hosted the JAMI Spring Symposium 2008 [1] in Akita. The theme was "From EMR to EHR". Unlike JAMI's annual conference in autumn where 500 presenters have 15 minutes of presentation, 16 presenters, who were selected through high level of reviews, had 45 minutes of presentation in the Spring Symposium. From the SPC of the conference, four "top of the tops" papers have been recommended for this issue.

Matsumura has submitted an alert system for inappropriate prescription [2]. It checks the prescription orders with patient information (lab results, etc.) that are also in the EMR. Numbers of inappropriate prescription corrections improved from 24% before to 54% after the alert system became operative. This kind of clinical decision support is now needed, basing on broader amount of clinical information stored in EMR, of course without any delay of the EMR system operation.

Ohboshi has analyzed nursing workflow by recorded data of HIS, focusing on intra-venous drip infusion practice [3]. There are many transaction records in CPOE, from the physicians' ordering to the nurses' confirmation of completion. This medical intervention (IV drip infusion) is the most vulnerable process where many medical errors are observed. At the same time, order changes are so often, especially in acute care hospitals.

Other than entry of orders, doctors in Japan are obliged to enter a great deal of other information into computers. The cancer registry is one of them, because there are many items within the survey which require the attending physician's decision. Shiki has analyzed a time process study on the cancer registry in UML form to make it visible[4].

The last one in this issue is proudly based on the worldwide popular gaming device from Japan, Wii by Nintendo, which has an accelerometer for indoor sport simulation. Mamorita has used this for tremor measurement of patients' symptoms [5].

This will be the last special topic of this type. Now, after the phase of promotion to publish high-quality papers of Japanese medical informatics researchers in English through these special topics in *Methods*, Japanese authors will submit directly.

3. JAMI Spring Symposium 2009 in Nagasaki and APAMI 2009 in Hiroshima

The 2009 JAMI Spring Symposium was already successfully held on June 13–14 at Nagasaki. Four recommendations from the SPC among 16 already selected papers have been submitted to the *MIM* editors in Japan.

And in this year, JAMI honorably hosts the APAMI 2009 conference, a tri-annual Asia-Pacific regional activity of IMIA in Hiroshima (This year we host two meetings in Nagasaki and Hiroshima) [6]. The *MIM* editor kindly invited top class paper presenters in this conference to submit an extended/revised version of their papers. Please look forward to these two top tier papers in future *MIM* editions.

References

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