

## Computerizing your medical practice with CMS – which CMS? ~ Dr. HO Chung Ping

The trend in medical clinic nowadays is towards computerization using a Clinic Management Software (CMS). Its functions include patient registration, recording clinical medical information including the symptoms, the diagnosis, treatment and prescription etc. It keeps the clinic accounts, drug inventory and generates drug labels, sick leaves certificates and receipts etc. In the early days, clinic computerization in Hong Kong is hampered by the lack of a good and reliable CMS. Now we have quite a few free ones to choose from, and they are very reliable.

The HKMA CMS 3.0 was developed by HKMA in 2007 and launched in 2009. It is an open source system so that it can be further developed by other vendors in the future. It is now installed in over 600 clinics. It won the Gold Award in 2013 ICT contest organized by the Productivity Council.

A post launch survey showed that many doctors wished to have **better technical support**. Another wish was that most doctors would like to have the scanning function to take care of the thousands of old medical records. The main problem is not the scanning process per se, because modern scanners work very fast. The main problem is how to index the scanned documents and map them to the patient index. This job can be taken care of by a **document management system (DMS)**.

### The Wenchang project

In order to improve the HKMA CMS 3.0, we have applied for a 3 million funding from the FHB and it was approved in December 2014. With the funding, we would

- Enhance the HKMA CMS 3.0 with improved functions, bug-fixing and to an improved DMS.
- To incorporate a eHR viewer to view the electronic health records, download the drug allergies table and the exchange some epidemiology data (the HKMA CMS YM)
- To incorporate the DMS to the CMS On-ramp. It would become the HKMA CMW NW

### HKMA CMS YM

The HKMA CMS 3.0 was designed so that it could exchange medical information with other medical systems, like the HA and the private hospitals. It used the standardized data format to facilitate data exchange. Previously, we can view a patient's discharge summary and lab reports etc by logging into the ppi-ePR system (ePR viewer). **Now the ePR viewer is replaced with the electronic health record viewer (eHR viewer).**

Apart from the upgrade features mentioned above, we shall incorporate the eHR viewer into the HKMA CMS 3.0. The user can then assess the electronic health record of his patient without leaving his CMS. NO separate log-in and authentication are needed and thus increasing the productivity. We called this CMS version CMS YM, after the Yuan Wang (遠望) space tracking ships which helped to track the Shenzhou space ship launching.

### CMS On-ramp

The CMS On-ramp is developed by the eHR office and it is now freely available for doctors to use. The underlying concept is virtually the same as our CMS 3.0 – to develop a clinic system for the daily clinic management and also for the exchange of medical information. More information can be assessed in the eHealth Office website.

[http://www.ehealth.gov.hk/en/ehr\\_service\\_provider\\_scheme/cms\\_on\\_ramp/index.html](http://www.ehealth.gov.hk/en/ehr_service_provider_scheme/cms_on_ramp/index.html)

### HKMA CMS NW

We have tested the CMS On-ramp and we found that it was a powerful and robust system. One of the attractions is that if a doctor prescribed a medicine in the clinic, the system will automatically check with the drug allergy table in the eHR to see for allergic history. This will avoid doctors accidentally prescribed a drug to which a patient was sensitive. However, it lacks the document management function which most private clinics would need. Hence we shall use the CMS on-ramp as a centre core program and incorporate our DMS. Effectively it is a hybrid of the CMS on-ramp and CMS YM, hence we call the new version HKMA CMS NW, after the legendary goddess Nuwa (女媧) who worked with Fu-chi to repair a torn hole in heaven.



Our implementation steps will be as follows

1. Draw up the specification of our work and invite tenders (done)
2. Develop and test the CMS YM and launch the system around August
3. Develop the test the HKMA CMS NW and launch the system in the end of 2015.

The HKMA CMS YM and NW will be free of charge to doctors. The package will include free onsite installation, 6 months free onsite technical support and 12 months free telephone remote support. We shall be running seminars and will keep members posted of the progress through the HKMA News.

PS The meaning behind the names

Many people were curious about the choice of the names of CMS YM and the Wenchang. Conceptually, the electronic health record is like a Space Station in which different countries send the equipment, scientists and supplies for the benefit of mankind. Our nation will be sending a Tiangong space station using a Long March V rocket in a new Launch Site in Hainan Island called **Wenchang (文昌)**. The launch will be tracked by **Yuan Wang** Space tracking ships in the Pacific. Likewise, the eHR project would need the contribution from all parties, and the Wenchang project will launch the CMS YW to help with the information exchange.

Photo of Nuwa on the right and Fuchi on the left. Note Nuwa holding the compass and the Fuchi was holding a right angle scale to repair the heaven. (taken from free Wikipedia)