New Healthcare Possibilities with eHRSS

"We need to think out of the box and make use of the advantages of the Electronic Health Record Sharing System (eHRSS) to help the community."

Dr CM Wong,
Medical Superintendant,
St. Teresa's Hospital

St. Teresa's Hospital (STH), one of the key players of the territory-wide eHRSS and its forerunner, Public-Private Interface – Electronic Patient Record (PPI-ePR), is a private hospital which aims to provide competent and quality healthcare services in Hong Kong.

"The well being of patients is our utmost concern. When it comes to using eHRSS, we will think about what is best for our patients," said Dr Wong.

The essence of information sharing through eHRSS, Dr Wong pointed out, is that a patient's health records can be readily available and easily accessible for reference by other doctors who take care of the patient, so as to provide more timely and appropriate treatment.
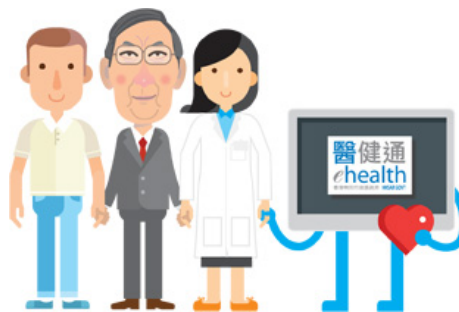
"Through eHRSS, we can get relevant and key health information of patients to help them when they come to us," he said.

eHRSS enables patients' health records to be readily available and easily accessible for reference by other doctors

Ready Compatibility with eHRSS

STH started developing its own clinical management system (CMS) as early as in 1995. Dr Wong said the hospital's system has modelled on the one developed and used by the Hospital Authority (HA). "Our systems, in other words, are actually speaking the same language," he described.

For that reason, Dr Wong said STH's system is readily compatible with eHRSS which used HA's CMS as a blueprint.

"Information captured in our system, such as allergy and adverse drug reaction (ADR), radiology examination and birth records, is now being shared and made available on eHRSS. Our next step is to upload discharge summaries, and laboratory and surgical reports," he added.

eHRSS for Allied Healthcare Professionals
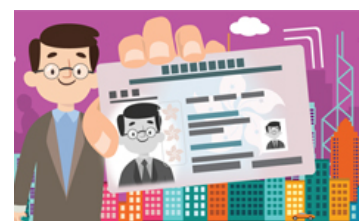**Professional healthcare through eHRSS**

Inputting Allergy and Adverse Drug Reaction Records via eHR Viewer
New eHR Viewer data sharing feature

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Invitations to PPI-ePR participants to join eHRSS

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More types of records captured in STH's system will be uploaded to eHRSS in next phase

Public-Private Partnership

Electronic health record (eHR) sharing can transform the way healthcare is delivered. A prominent example is the Public-Private Partnership (PPP) healthcare programmes.

STH has been actively supporting PPP initiatives. For example, it has joined the Haemodialysis (HD) PPP Programme run by HA this year. Under the programme, eligible patients with end stage renal failure are referred to STH to receive HD service.

Dr Wong said patients who have insurance coverage for or can afford some services from the private healthcare sector can benefit from these collaborative efforts, in which the public-private interface provided by eHRSS plays an important role.

"Waiting time for medical tests in public hospitals can be long. We can speed up the process by utilising our hospital's capacity in conducting these medical tests. Test results uploaded by us via eHRSS can be received by public hospitals immediately," he remarked.

"This way, serious illnesses or conditions can be detected at an earlier stage, enabling timely diagnosis and treatment."

As more and more patients with chronic diseases are receiving healthcare services from both public and private healthcare providers (HCPs) , Dr Wong said the latter can also help monitor these patients' conditions.

"For instance, we can check, through eHRSS, what medications patients were given by other doctors and whether the medications were taken properly. We can also avoid duplication in prescriptions," he explained.

Regular collaborative initiatives aside, STH also took up some clinically stable patients from public hospitals during the peak flu season in summer 2017. "Doing so can help relieve the demand surge on public hospitals' services, while ensuring continuation of care for patients who shared their health records with us through eHRSS," said Dr Wong.
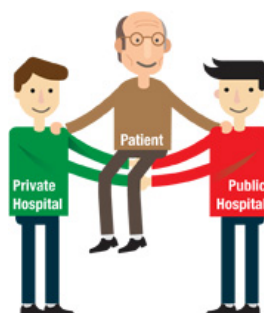
Private HCPs can help monitor the conditions of patients with chronic diseases as many are receiving healthcare services from both public and private sectors

There is potential for combining eHR & other functionalities to deliver optimal healthcare services

Integrate eHR Sharing with other Functionalities

Dr Wong believes that as society's healthcare needs change, eHRSS can provide a platform to combine eHR and other functionalities to deliver optimal healthcare services. One example, he suggested, is to integrate eHRSS with telemedicine which has been practised in Mainland and many parts of the world.

"Our population is aging and elderly people are more likely to develop chronic diseases. Adopting telemedicine such as video consultation can save them the trips to hospitals for routine medical consultations, as travel can be difficult for seniors with chronic conditions and limited mobility," he said.

"The technology is already there. Say if video consultation is enabled in elderly care homes, we can send a nurse there to check and upload patients' vital signs such as blood pressure, with real time and remote consultations conducted by their doctors."

"If telemedicine is supported by eHR sharing, we can achieve better and enhanced care for patients. We can explore additional functionalities of eHRSS to meet the society's needs."

Future Development and Challenges in eHRSS

On Stage Two Development of eHRSS, Dr Wong said he is looking forward to achieving further two-way eHR sharing through the system, especially imaging records.

He also welcomed the idea of including Chinese medicine in eHR sharing, adding that it will be useful to know if patients are taking Chinese medicine and whether there is any interaction with western drugs.

As to future challenges, Dr Wong highlighted the importance of data security as the usability of eHRSS expands. While acknowledging patients' desire for greater privacy, he was concerned about allowing patients' control over the scope of data sharing, saying that it could increase risks for patients themselves in the absence of comprehensive medical information for doctors to make clinical decisions.

Looking ahead, Dr Wong foresees that in a decade or so, all hospitals in Hong Kong will be using eHRSS to seamlessly exchange patients' health records. "This will be an essential part of patient care and we, as HCPs, are keen to see it happen," he commented.

eHRSS for Allied Healthcare Professionals

Radiographers and pharmacists of the Hospital Authority, the Department of Health and private hospitals are among the six healthcare professional (HCProf) groups given access to the Electronic Health Record Sharing System (eHRSS) last year. eHealth News has invited their representatives to share their views on the system.

Dr Cheng Pui Wai, Radiologist-in-charge, Scanning Department, St. Teresa's Hospital (STH)

Speaking on behalf of the radiographers of the hospital, Dr Cheng reflected that his colleagues welcome the implementation of eHRSS and feedback has been positive.

Citing an example in diagnostic radiology services, Dr Cheng said patients' health information is important to radiographers in their work.

"Some patients, such as seniors or those with diabetes, may have adverse reaction to contrast agents which are often required for computed tomography scans. Radiographers need to know patients' drug allergy records and their renal functions in order to determine whether it is suitable to give them contrast injections or how much should be administered. This is for their safety," he explained.

"Also, if we know that patients have already taken certain medical examinations in public hospitals, we can avoid repeating the same items. Instead, we can have better use of time and resources to plan for other investigations. This would not have been easily done without eHRSS."

For patients' safety, radiographers need to know their drug allergy records etc. in order to determine whether it is suitable to give them contrast injections or how much should be administered

Learning that eHRSS access will soon be extended to community-based radiographers, Dr Cheng considered that HCProfs, whether from the public or private sectors, should be able to access patients' information as long as they are authorised and properly trained.

"Wherever a patient is, when he/ she needs healthcare services, any HCProf would need the patient's health information to deliver proper care," he said.

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Dr Cheng further stressed the importance of balancing personal privacy and HCProfs' need to know in order to provide healthcare services. "The security measures and the role-based access control mechanism (RBAC) of eHRSS have been working well to protect data privacy," he commented.

Mr Eric Wong,
Chief Pharmacist, Pharmacy Department, STH

Mr Wong said eHRSS has been well received by pharmacists, adding that it can improve drug safety by providing a platform for sharing standardised drug data and optimising the medication process.

Using Clinic Management System adaptation modules developed for eHRSS, Mr Wong said pharmacists are able to input structured data in accordance with the standards applied in the system.

"For example, we have adopted the Structured Alert Adaptation Module (SAAM) developed for eHRSS to capture patients' allergy records. Data input using SAAM is standardised and well structured, with the allergen list coming from the Hong Kong Medication Terminology Table," he said.

Mr Wong added that from drug allergy and adverse reaction, to prescribing, dispensing and administration of drugs, eHRSS enables documentation of structured data. "eHRSS can play a role in allergy and drug checking that supports medication decision process," he emphasised.

Commenting on the extension of eHRSS access to community-based pharmacists, Mr Wong said that it can help reduce the workload of the public healthcare sector, while maximising use of resources at the community.

"Very often patients are consulting different doctors and may receive similar medications for the same illness. The information sharing of eHRSS platform can facilitate in addressing the problem of polypharmacy, and community-based pharmacists can also help in the process of medication reconciliation to avoid duplication of medication or drug interaction," said Mr Wong.

"Ultimately it can strengthen a patient-oriented culture, and is helpful to the profession's development."

On the implementation of RBAC, Mr Wong agreed that the mechanism has been working well in STH. "We educate our frontline colleagues on eHRSS data security and privacy and make them understand that accesses will be logged and audited," he said.

Ms Agnes Lau,
Clinical Pharmacist, Queen Mary Hospital

As a clinical pharmacist working with doctors and nurses in hospital inpatient wards, Ms Lau has full eHRSS access and believes the system is a bridge between primary and secondary healthcare.

"In our day-to-day work, we need to know the medication and vaccination histories of patients, what medications they are taking, including not only those prescribed by primary care doctors, but also Chinese medicines or even dietary supplements," she said.
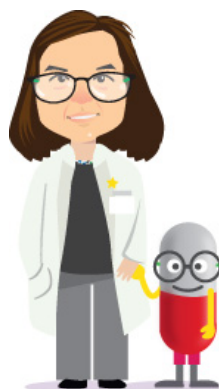
"Sometimes vaccination, health supplements and over-the-counter drugs may cause allergies or adverse reactions in patients. Patient records in this respect are absolutely useful to HCProfs. If we can get the information from eHRSS, we can have a more comprehensive picture on the prescription and compliance of medication of the patients, which in turn helps improve healthcare quality and drug safety," added Ms Lau.

Ms Lau welcomed the move to enable eHRSS access for her counterparts in the community, saying it can meet the needs of society, as well as enhance the professionalism of the pharmacy industry.

"There is increasingly more public-private partnership in medication dispensary. Patients will visit local pharmacy shops for self-financed drugs prescribed by public hospitals. At the same time, some non-governmental organisations also run community pharmacies. For some self-financed drugs such as anti-coagulant and targeted drug for cancer treatment, their usage has to be closely monitored. Drug checking by community-based pharmacists therefore helps enhance patient safety."

"Our hospital has once received a call from a pharmacist working at a major chain pharmacy shop to verify a change in the prescription of a diabetic patient who is a long-time customer of the shop. It would be of much help if such information is shared to them through eHRSS," she said.

When talking about how to encourage more of her counterparts to participate in eHRSS, Ms Lau suggested the Government could promulgate more about the benefits of eHRSS on both patient safety and how HCProfs would be better supported by the system in delivering healthcare services. She also suggested that a certification mechanism for eHRSS participating community pharmacies might be explored, so that the general public will have more confidence in getting prescription there, which, in a way, could drive more participation of HCProfs in eHRSS.

Drug checking with the use of eHRSS information by community-based pharmacists helps enhance patient safety

Inputting Allergy and Adverse Drug Reaction Records via eHR Viewer

In the previous issue of eHealth News, we reported in brief that an input module would be launched for healthcare providers (HCPs) to add and edit patients' drug allergy and adverse drug reaction (ADR) records in the Electronic Health Record Sharing System (eHRSS). We are pleased to inform readers that the new function has been rolled out on 23 October 2018. In this issue, we will show you exactly how it works.

HCProfs can share patients' allergy & ADR records to eHRSS via the eHR Viewer

The input module enables healthcare professionals (HCProfs), including medical practitioners, registered or enrolled nurses and registered dentists of eHRSS HCPs, to document their patients' allergy and ADR records to eHRSS via the eHR Viewer. The function aims to enhance medication safety by encouraging HCPs' sharing of patients' allergy and ADR records via eHRSS.

All HCPs are given access to the Allergy and ADR input module (except those that are already uploading allergy and ADR records to eHRSS, or those that are technically ready to do so). Access to the module will be granted to eligible HCPs by default. Prior enrollment or set up is not required.

HCProfs who have joined Public-Private Partnership (PPP) programmes of the Hospital Authority and the Department of Health can also access the module via the respective PPP applications.

Core Features at a Glance

The new module provides the following user-friendly features –

Built-in smart search of allergen and ADR causative agent

Efficient documentation via selection panel

Update and deletion of a particular data entry in the record

Let's see how simple and easy it is to create a new record!

Creating a New Record

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Invitations to PPI-ePR participants to join eHRSS

Measures to Register with eHRSS Using New Smart HKICs
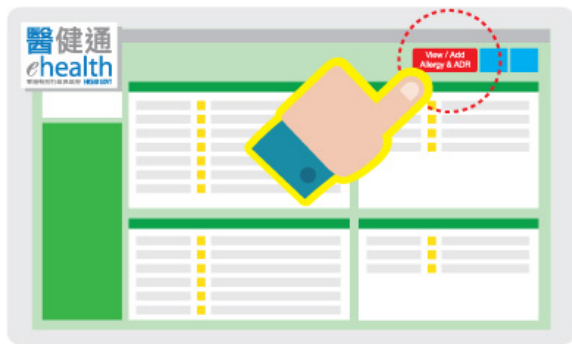eHRSS registration using new smart identity cards

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1 Login eHR Viewer or PPP programme profile, then click the "View / Add Allergy & ADR" button in the patient panel.
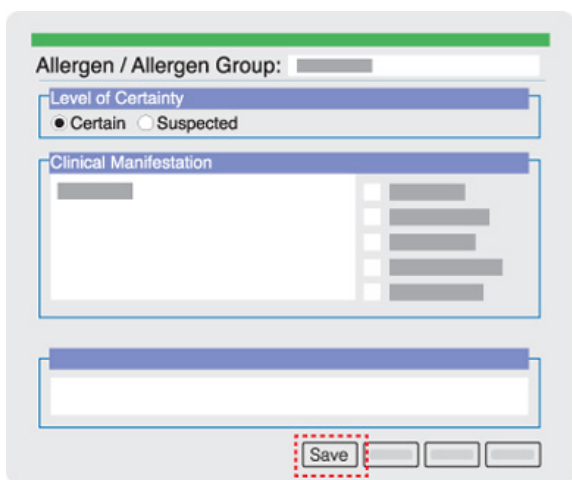
2 Click either the "+ Allergy" or "+ ADR" button to create a new allergy or ADR record.

New Allergy Details
Allergen / Allergen Group: aspi
aspirin
Aspi-Cor (aspirin)
Aspilets (aspirin)
Caspin (aspirin)

Allergen / Allergen Group:
Level of Certainty
● Certain ○ Suspected
Clinical Manifestation

3 Search for the "Allergen" or "ADR Causative Agent" by keyword search.

Allergen / Allergen Group:
Level of Certainty
● Certain ○ Suspected
Clinical Manifestation

Save

4 Input the clinical manifestation by keyword search or by selecting the checkboxes from the quick list provided, and key in additional information as required. Then click "Save" to store the record in eHRSS.

The new record will then be shown on the eHR Viewer immediately for sharing!

Want to know more? A quick guide and a detailed user guide on the new function are now available at the eHRSS portal for HCProf's easy reference (User Documents - User Guide for Allergy and ADR Input Module).
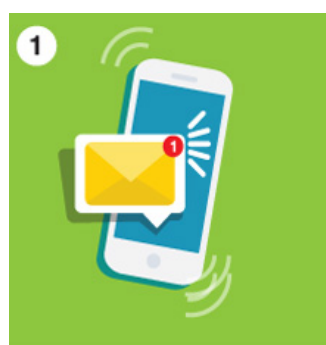
Easy Registration with eHRSS for PPI-ePR Participants

The Public-Private Interface – Electronic Patient Record Sharing Pilot Project (PPI-ePR) launched by the Hospital Authority (HA) in 2006, was a pilot programme for one-way sharing of patients' health records in HA to participating healthcare providers in the private sector. With the Government's launch of the Electronic Health Record Sharing System (eHRSS) in 2016 - a territory-wide information technology infrasturture for two-way sharing of patients' health records between public and private healthcare providers, continuous efforts are made to facilitate PPI-ePR participants to join eHRSS as the former is planned for gradual phasing out as a pilot.

At the time of eHRSS' launch in March 2016, there were around 400 000 patients enrolled in PPI-ePR. To enable PPI-ePR participants to continue sharing patient records and enjoy the greater benefits of two-way sharing brought by eHRSS, measures were introduced to facilitate them to conveniently join eHRSS.

In early 2016, invitation packages on easy registration with eHRSS were sent to PPI-ePR participants. The campaign was received with encouraging response. To further appeal to those who have yet to join, a second wave campaign will be launched in December 2018.
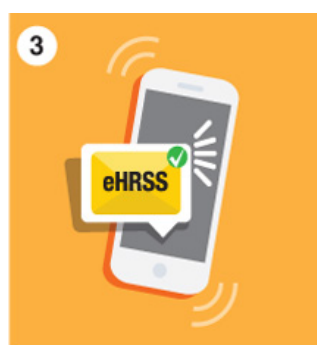
Under the new campaign, registration with eHRSS is even simpler and more convenient for PPI-ePR participants. Registration can be done in 3 simple steps –

An SMS invitation will be sent to PPI-ePR participants (aged 16 or above and who have not registered with eHRSS)* via their mobile numbers registered in PPI-ePR. The SMS will redirect participants to the Easy Registration website.

At the Easy Registration website, participants only need to input their mobile phone numbers and PPI-ePR Access Key numbers to submit applications.

A notification SMS will be sent to participants' mobile phones to confirm successful registration.

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Alternatively, participants can choose to join eHRSS through existing means*, including:

i) in-person registration at Electronic Health Record (eHR) registration centres;

ii) online submission at the eHRSS website; or

iii) submission to the eHR Registration Office via fax, post or drop-in box.

*For PPI-ePR participants under age 16, please register through existing means.

Participants are welcome to contact the PPI-ePR Programme Office at 3467 6220 for more details and enquiries.

Fun Quiz
Chance to win a prize

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# Measures to Register with eHRSS Using New Smart HKICs

To tie in with the commencement of the smart Hong Kong Identity Card (HKIC) replacement exercise in end-2018, the Electronic Health Record Office will implement measures to facilitate registration with the Electronic Health Record Sharing System (eHRSS) for holders of new smart HKICs.

Commencing from end-November 2018, the Hong Kong Government will start issuing new smart HKICs to replace the existing ones. The territory-wide identity card replacement will be conducted in phases, with the whole exercise estimated to complete in about four years. During this period, both existing and new smart HKICs will be accepted for patient registration with eHRSS. To accommodate the use of new smart HKICs, the Smart Identity Card Electronic Authentication System of eHRSS will be updated.

So what is the main difference between the new and existing smart HKICs for eHRSS registration? Frontline staff of healthcare providers (HCPs) may note that the "chip" of the new smart HKIC, used for storing and processing data of the cardholder, is now embedded at the back of the card. While this means slight changes to the existing workflow when handling patient registration with eHRSS, the whole process remains simple and easy.
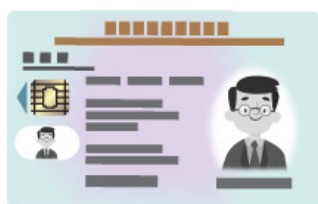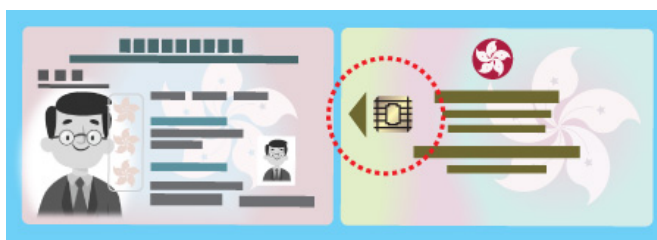
Existing smart HKIC   New smart HKIC with chip embedded at the back

New Patient Registration Workflow

To facilitate the use of both existing and new smart HKICs for eHRSS registration, the user interface of the "All-in-One" function of the registration module will be revamped to ensure the workflow is clear, user-friendly and simple-to-use. The system layout will be re-arranged into 2 panels, with smart HKIC workflow on the left and manual input workflow on the right. Users can refer to the icons and instructions for guidance to complete eHRSS registration for patients.

New Healthcare Possibilities with eHRSS
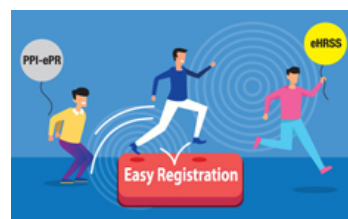STH and eHR sharing

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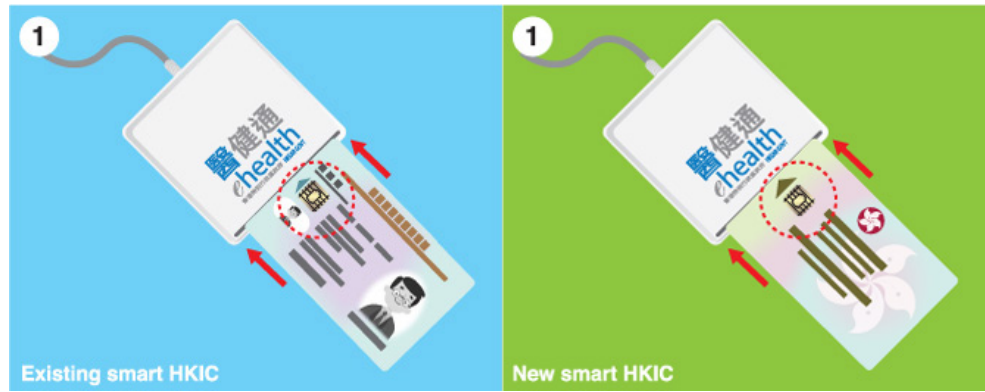**Easy Registration with eHRSS for PPI-ePR Participants**
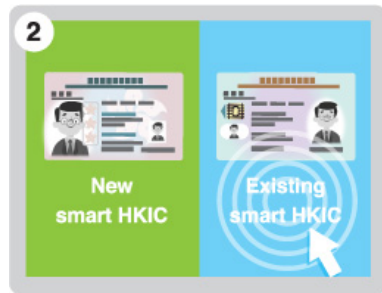Invitations to PPI-ePR participants to join eHRSS
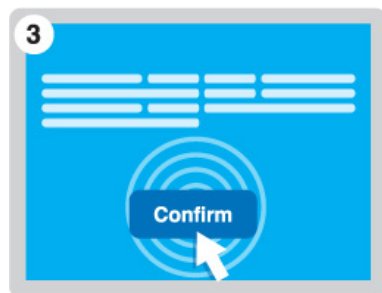

eHRSS Updates
Latest eHRSS activities

Below are highlights of the smart HKIC workflow for easy reference -

Check the version of the smart HKIC of the patient and insert card into the card reader with chip facing up.

Select the version of the smart HKIC and gender of the patient.

Confirm system messages when prompted to proceed with loading and reading the smart HKIC.

After confirming that the patient agrees to access the data stored in his/ her smart HKIC, follow the remaining data input procedures as the previous workflow to complete the registration.

Alternatively, users can choose to manually input the required personal particulars to the system via the right panel of the system page to register for the patient.

For more details and enquiries for the new registration workflow, please contact our staff of the HCP hotline at 3467 6230.

eHRSS Updates

The Electronic Health Record Sharing System (eHRSS) has achieved the ISO/IEC 27001:2013 Standard accreditation for its Information Security Management System, and community promotion continued through participation in two large-scale local exhibitions.

ISO/IEC 27001:2013 Certification

eHRSS was awarded the ISO/IEC 27001:2013 certification of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) after its Information Security Management System (ISMS) had passed the relevant certification audit.

ISO/IEC 27001:2013 is an international standard developed by ISO and IEC to provide requirements for establishing, implementing, maintaining and continually improving an ISMS.

Receiving the certificate on 17 September 2018 from the certification body, the Permanent Secretary for Food and Health (Health), Ms Elizabeth Tse, said, "We are pleased that eHRSS has been awarded the ISO/IEC 27001:2013 certification for its ISMS. It is a milestone in the continuous improvement of the services and information security management under eHRSS. We will strive to provide better quality services in the second stage development of eHRSS."

The Permanent Secretary for Food and Health (Health) received the ISO/IEC 27001:2013 certificate from the certification body

Hong Kong Sports and Leisure Expo 2018 (HKSLE 2018)

An eHRSS booth was set up at HKSLE 2018 held at the Hong Kong Convention and Exhibition Centre (HKCEC) from 18 to 24 July 2018 to raise public awareness on the implementation of the Electronic Health Record (eHR) Programme and promote eHRSS.

HKSLE was organised by the Hong Kong Trade Development Council for promoting physical and mental well-being in the community. Throughout the one-week event, the benefits of eHR sharing was promoted, and features of eHRSS as well as the development under Stage Two were highlighted to visitors. Participating children, youth and parents were engaged in the multi-media display and in-booth fun games to learn more about eHRSS.

Registration counter was also set up at the display booth, with more than 1 700 members of the public joining eHRSS during the event period.

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Visitors were engaged in multi-media display and in-booth fun games to learn more about eHRSS

InnoTech Expo 2018

The InnoTech Expo 2018, a ten-day event organised by Our Hong Kong Foundation, was held at HKCEC from 23 September to 2 October 2018. eHRSS was amongst one of the award-winning local innovation and technolgoical achievements featured at the "Pride of Hong Kong" pavilion of the Expo.

With multimedia information and detailed guide, visitors were introduced to eHRSS

Representatives of the eHR Office and the Hospital Authority attended an innovators' demonstration session to share with participants the concepts and operations of eHRSS

With multimedia information and detailed guide by staff members, visitors were introduced to the concepts of eHR sharing, as well as the design and development of eHRSS. Representatives of the eHR Office and the Hospital Authority also attended one of the innovators' demonstration sessions to share with participants the concepts and operations of eHRSS, and illustrate how information and communications technology had been effectively utilised in establishing the territory-wide platform with high usability, stability and security to help enhance healthcare services for the benefit of the healthcare sector and the society.

To facilitate visitors to join eHRSS, on-site registration was also available. Over 800 members of the public had registered during the event.

eHRSS Updates
Latest eHRSS activities

Fun Quiz
**Chance to win a prize**

Fun Quiz - Chance to Win a Prize

Find the Missing Words

Here is a game to test your knowledge about the Electronic Health Record Sharing System (eHRSS). The missing words (in abbreviations) in the following descriptions about eHRSS are hidden in the grids. Find the words, circle them and send your answers in. Winners will receive a prize (while stock lasts). (Hint: The answers can be found in this issue of eHealth News.)
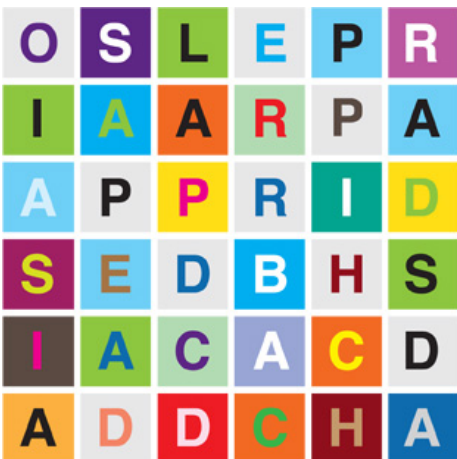
1. The new eHRSS function allows healthcare professionals to input patients' allergy and _____ records.
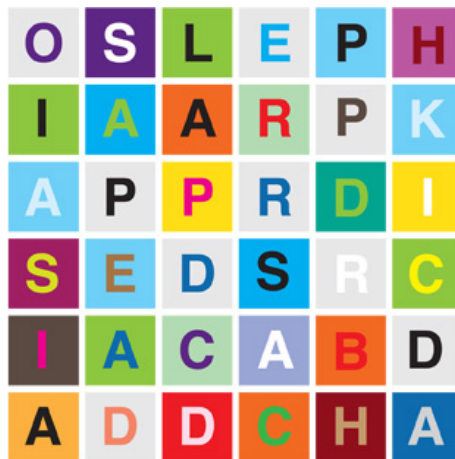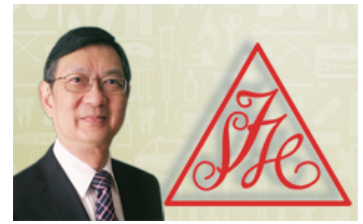

2. The Electronic Health Record Office will implement measures to facilitate registration with eHRSS for holders of new smart _____.

3. eHRSS has recently achieved the _____/IEC 27001:2013 Standard accreditation for its Information Security Management System.
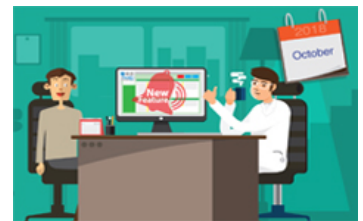

4. An easy registration campaign is about to be launched to invite _____ participants to join eHRSS.

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Join the Quiz

To join the quiz, please print out this page, mark your answers and fill out the required information. Completed entries should be returned by fax at 2300 7921 or email to enquiry@ehealth.gov.hk on or before 11 January 2019.

Name :

Tel. no. :   Email :

Address :

After the closing date on 11 January 2019, you can check the correct answers in the newsletter posted at the eHRSS website. Personal particulars and contact information collected in this fun quiz will only be used to notify winners and send prizes. All personal data collected in this fun quiz will not be disclosed to any third parties and will be deleted by the Electronic Health Record Office two weeks after all prizes have been sent.

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