

[Singapore]

Health Database in an IT Society*¹

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Present Progress of IT in Healthcare in Singapore

The National Electronic Health Record (NEHR) system allows sharing of medical info, mainly accessible in public institutions and a few selected private clinics on a trial basis.

The GP Clinic Electronic Medical Record and Operation System [“Project CLEO”] allows some GP clinics to view NEHR information.

In the long run, GPs are expected to contribute to the NEHR so that information flow can be in both directions

Current Status of Protection of Personal Information

The Personal Data Protection Act (PDPA) took effect recently. Many organisations are still trying to cope with full effects of the new Act. Advisory guidelines have been developed to help clarify the main legislation.

A public consultation on proposed Advisory Guidelines for Healthcare was held recently to gather comments.

The guidelines highlight Consent, Purpose Limitation and Notification Obligations, e.g. document verbal consent to referrals by making a note inside patient file, or when collecting for purposes unrelated to patient’s care, e.g. teaching purposes

On Access and Correction Obligations, patients can request for details on personal data kept by an organisation [e.g. via a medical report]. Patients can also request for correction of error(s) in personal data [for professional opinion, the organisation is not required to correct or alter]. Organisations can charge a reasonable fee for requests for access.

Regarding Protection, Accuracy, Retention

Limitation, Transfer Limitation and Openness Obligations, the advisory guidelines acknowledge that there is no “one size fits all” solution. No specific retention period is prescribed.

Singapore Medical Association (SMA) dialogued with the Ministry of Health & PDPC before and after law came into effect, providing feedback on medical research, managed care companies, and medical records. SMA also organised seminars as part of educating its members on PDPA.

Use of the Citizen Numbering System

The National Registration Identity Card (NRIC) system is used extensively in Singapore, for verification of identity and other transactions. PDPC advisory guidelines on NRIC numbers highlight that consent is needed for collection, usage, and disclosure of NRIC numbers.

The SingPass system is a password that allows access to government e-services, and is used in conjunction with the NRIC. Services include car road tax, HDB flat, electrical, water and gas utilities, CPF, income tax, and medical records.

Merits and Demerits of Healthcare Supported by IT

Pros

Using a common database leads to fewer duplicate or unnecessary tests, reduced medication errors and adverse drug events. It is also easy to search and retrieve data in a digital format. IT also facilitates easier communication.

Cons

Doctors need to be mindful to ensure that patient confidentiality is not compromised. Assistance needs to be provided to less IT-savvy doctors, so that the move towards IT does not exclude a

*¹ This article is based on a presentation made at the Symposium “Health Database in an Information Society” held at the 29th CMAAO General Assembly and 50th Council Meeting, Manila, the Philippines, on September 24-26, 2014.

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segment of doctors.

An example of the misuse of IT, involved a doctor from a government hospital, who accessed electronic medical records of two women who were not his patients, in 2007 and 2009. He was fined \$10,000 and censured by the Singapore Medical Council (SMC)

It was the 1st time a doctor had been disciplined and convicted for such a breach of conduct. Following this case, Ministry of Health (MOH) assured that access to electronic medical

records of patients in public hospitals is tracked and audited.

Conclusion

Ensuring patient confidentiality needs to be the priority, while the usage of IT spreads throughout all aspects of healthcare. IT is not a substitute for the fundamentals of medicine, e.g. clinical skills, doctor-patient communication, etc.

Health database in a IT society

Singapore Medical Association – presentation at CMAAO 2014 Manila

Overview

1. Present progress of IT in healthcare in Singapore
2. Current status of privacy protection and personal information protection including handling of gene information
3. Use of the citizen numbering system
4. Merits and demerits of healthcare supported by IT

1. Present progress of IT in healthcare in Singapore

- Electronic medical records
 - National Electronic Health Record (NEHR) system
 - Sharing of medical info, mainly accessible in public institutions and a few selected private clinics on trial basis
 - data contributed by restructured hospitals and government polyclinic, who have gone paperless and running electronic medical records

1. Present progress of IT in healthcare in Singapore [2]

- Electronic medical records
 - types of patient information available in phase 1
 - Admission and visit history
 - Hospital inpatient discharge summaries
 - Laboratory results
 - Radiology results
 - Medication history
 - Operative procedure history
 - Allergies and adverse drug reactions
 - Childhood immunisations

Present progress of IT in healthcare in Singapore [3]

- GP Clinic Electronic Medical Record and Operation System ["Project CLEO"]
 - in progress in GP clinics
 - they can view NEHR to help them manage patients
- In the long run, GPs are expected to contribute to the NEHR so that information flow can be in both directions
- security - one pass, two factor authentication (2FA) token

2. Current status of protection of personal information

- Personal Data Protection Act (PDPA) took effect in phases
 - starting with the provisions relating to formation of Personal Data Protection Commission (PDPC) on 2 January 2013
 - provisions relating to Do-Not-Call (DNC) Registry came into effect on 2 January 2014
 - main data protection rules on 2 July 2014
 - many organisations still trying to cope with full effects of the new Act
- Advisory guidelines developed for various sectors and scenarios
 - help clarify main legislation

Medical aspects of PDPA (1)

- Public consultation on proposed Advisory Guidelines for Healthcare
 - Consent, Purpose Limitation and Notification Obligations
 - Deemed consent [similar to existing medical concepts of consent-taking]
 - Referrals – guidelines suggest to document verbal consent by making a note inside patient file
 - Collecting data of other individuals from patients (e.g. asking about family history of cancer) – collection w/o consent granted under exemptions within the PDPA
 - Collecting for purposes unrelated to patient's care, e.g. teaching purposes – organisation should notify patient, and obtain consent if the data cannot be anonymised
 - Disclosing personal data to managed care providers or employers – organisations may only disclose with patient consent, or under a PDPA exemption; should also consider if such disclosure would be in breach of other legal obligations or ethical requirements

Medical aspects of PDPA (2)

- Public consultation on proposed Advisory Guidelines for Healthcare (con't)
 - Access and Correction Obligations
 - Patients can request for details on personal data kept by an organisation [advisory guidelines clarify that organisations can provide this info in another format, e.g. via a medical report]
 - Also the ways the data has been used or disclosed
 - Patients can also request for correction of error(s) in personal data [advisory guidelines clarify that where diagnosis is a professional opinion, the organisation is not required to correct or alter]
 - Organisations can charge a reasonable fee for requests for access

Medical aspects of PDPA (3)

- Public consultation on proposed Advisory Guidelines for Healthcare (con't)
 - Protection, Accuracy, Retention Limitation, Transfer Limitation and Openness Obligations
 - Protection – no "one size fits all" – organisations to make reasonable security arrangements
 - Retention - retaining personal data of existing patients for the purpose of having access to their consultation history would be considered a valid purpose – no specific retention period prescribed
 - Rights and obligations, etc. under other laws
 - E.g. doctors should still continue to notify the Ministry of Health regarding reportable infectious diseases; no need to obtain consent

Medical aspects of PDPA (4)

- SMA dialogued with Ministry of Health & PDPC before and after law came into effect
- submitted feedback during public consultation period
 - Medical research
 - Managed care companies
 - Medical records
- SMA also organised seminars as part of educating its members on PDPA

3. Use of the citizen numbering system

- National Registration Identity Card (NRIC) numbers used extensively in Singapore
 - government [verification of identity]
 - private [e.g. banks, telecommunications, etc.]
 - winners of lucky draws [typically, only last three or four digits are published to prevent identity theft]
- advisory guidelines on NRIC numbers
 - consent needed for collection, usage, and disclosure of NRIC numbers
 - organisations to ensure protection from accidental disclosure
 - organisations should avoid over-collecting personal data; consider if alternatives are available
- SingPass system
 - password that allows access to government e-services; used in conjunction with NRIC
 - car road tax, HDB flat, electrical, water and gas utilities, CPF, income tax, and medical records.

4. Merits and demerits of healthcare supported by IT

- Pros
 - Common database - fewer duplicate or unnecessary tests, reduced medication errors and adverse drug events
 - Easy to search and retrieve data in digital format
 - Easier communication [many doctors already use messaging apps for communication with other doctors in an informal basis, e.g. Whatsapp, Google Talk, Facebook message, etc.]
- Cons
 - Need to ensure patient confidentiality is not compromised
 - Some doctors may not be ready [need to provide assistance to less IT-savvy doctors, e.g. training & funding assistance]

Case relating to misuse of IT

- case involving a doctor from a government hospital, who accessed electronic medical records of two women who were not his patients, in 2007 and 2009
- Fined \$10,000 and censured by the Singapore Medical Council (SMC)
- 1st time a doctor has been disciplined and convicted for such a breach of conduct
 - checked the first woman's records after learning that she was seeking treatment for a suspected sexually transmitted disease
 - accessed the records of the second woman to check when she had appointments at the hospital, so as to avoid hostile run-ins with her
 - actions came to light after the second woman filed a complaint against him in August 2009
- Following this case, Ministry of Health (MOH) assured that access to electronic medical records of patients in public hospitals is tracked and audited

Conclusion

- Patient confidentiality has to be the priority
- Usage of IT will spread throughout all aspects of healthcare
- IT not a substitute for clinical skills, doctor-patient communication, etc.

References

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The End

Thank You