Contributing Data to the NEHR

MOH Phase 2 Consultation Sessions
January – February 2018
What is the NEHR?

Why is the NEHR necessary?
   Why is data contribution to the NEHR necessary?

What needs to be contributed to the NEHR? And how?

What support initiatives can you tap on?

We are listening…

Q&A
What is the NEHR?
National Electronic Health Record (NEHR)

Introduced progressively since 2011, the NEHR is a secure system that provides healthcare professionals with a consolidated view of patients’ **summary health records**.

The NEHR was designed with inputs from healthcare professionals from different vocations and sectors.

Over the years, the look-and-feel of the NEHR has been enhanced to improve the usability in order to better support clinical decision making and care provisioning to patients.
A glimpse on NEHR usage among other interesting facts

In December 2017,

- More than 1200 institutions have access
- More than 14,000 users accessed the NEHR
- More than 1,000,000 patient records were accessed
Currently, data contribution is voluntary.

27% of private licensees have access to the NEHR, but only about 3% are contributing.

Hence, the intent to make data contribution mandatory for all licensee under the new Healthcare Services Bill to reap the full benefits of the NEHR.

<table>
<thead>
<tr>
<th>Types of Healthcare Providers</th>
<th>Total Base</th>
<th>Institutions Accessing^</th>
<th>Institutions Contributing^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Hospital</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>National Medical/ Specialist Centre</td>
<td>8</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Polyclinic</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Community Hospital</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Residential Care</td>
<td>100+</td>
<td>65</td>
<td>21</td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambulatory</td>
<td>4000+</td>
<td>1056</td>
<td>76</td>
</tr>
<tr>
<td>Private Clinical/ Radiology/Laboratory</td>
<td>100+</td>
<td>8</td>
<td>0</td>
</tr>
</tbody>
</table>

^ Estimates by IHIS as at 1 Jan 2018

1173 140
Patient demographics

Customisable summary view by data types

Left navigation to wealth of information
Medical alert, allergy / adverse drug reaction from CMIS
Using “All Investigation” to show next level of information

Table listing of all investigations, with preview of selected report on the right without additional click

Sensitive health information (SHI) requires second level of authentication
User particular and reasons for accessing the SHI are required and logged to protect patient confidentiality.
Using this Lipid Panel under "General Lab" as another example.

Ability to trend in table format...
• Quick selection of trending period
• Mouse over data point for details like source institution(s)

Ability to trend in graphical format...
Mouse over data point for value
Reasons for locking records for access

- A patient record can be locked due to one or more of the following reasons:
  - Patient has opted out of sharing his / her data in NEHR.
  - Patient demographics information across various contributors are inconsistent, and hence for patient safety, the information is not displayed.
  - Patient record is no longer valid for clinical care.
- When the record of such a patient is searched in the NEHR, you will see a screen similar to the one below.
Dear User,

Thank you for accessing the NEHR prototype. This prototype has been designed to showcase the new user interface and get you accustomed to navigating in the revamped NEHR. While using the prototype, please do note:

1. Clinical data shown within the prototype has been chosen to exhibit the full capability of the redesigned NEHR and is not meant to represent one actual patient.
2. Not all the functions will be available on every screen. The clickable elements of the screens will be highlighted with a blue box when you click anywhere on the page. Please scroll through the page to locate the clickable elements.

3. The screens presented are accurate as of 22 April 2017. Screens will be progressively updated if there are any changes.
4. Access to the different features is based on your user role and access rights. Therefore, not all the features you can test in the prototype may be available to you in the system.

Visit us at https://cms.ihis.com.sg/sites.nehr to learn more about the NEHR. You can also email us at nehr.feedback@ihis.com.sg if you have any feedback or enquiry.

The NEHR Team
Why is the NEHR necessary? Why data contribution is necessary?
A strategic long-term enabler for care delivery

- To establish longitudinal, patient-centric records with a national vision of “One Patient, One Health Record”

- To facilitate care quality and care integration across healthcare institutions through the sharing of medical records between public and private healthcare providers in different sectors

- Ageing population
- Increase in burden of care for chronic diseases
- Low IT maturity outside of PHIs
- Lack of patient centricity
- No means to share data across different care settings or even between different acute settings
Your patients and their caregivers need the NEHR

Her electronic health records showed her admission history, the therapist could just retrieve and refer to her recent x-rays.
The NEHR’s Vision of “One Patient, One Health Record”

Enabling safer, more effective, and more personalised CARE

- **Connects Healthcare Professionals for Patient-centred Care**
  - The summary of patients’ health records are securely stored in one place electronically, for multidisciplinary healthcare professionals across Singapore to work together to provide better care.

- **Achieves Better Health Outcomes**
  - With a better understanding of patients’ healthcare history through the NEHR, doctors are able to make better-informed diagnoses and decisions for the optimum course of treatment.
  - Empower patients to take charge of their health with access to their health records.

- **Raises Patient Safety**
  - Doctors can view medication prescribed, medication allergies, diagnoses, and investigation results to deliver safer care and avoid unnecessary adverse drug reactions.
  - During emergencies, it can save lives.

- **Enhances Patient Experience with Seamless Care**
  - The NEHR helps patients move seamlessly across care providers. Provides patients greater convenience, saving them time and money by minimising duplication of tests and investigations.
What needs to be contributed to the NEHR? And how?
NOT your personal case notes of every consultation…

- Patient data sets contributed to the NEHR focus primarily on patients’ summary health records.
- No direct data-entry into the NEHR. Summary records are transmitted seamlessly from providers’ electronic systems.
- Not asking for retrospective data.
- Data required for contribution is based on the nature of service provided by the respective healthcare sector:
  - Patient demographics
  - Patient visits
  - Diagnosis
  - Discharge Summary
  - Medications
  - Laboratory Reports
  - Radiology Reports
  - OT Notes / Procedure / Treatments
  - Immunisation
  - Allergy
An example of what a GP will contribute

A typical GP clinic will be required to capture & contribute these data to NEHR

- **Patient profile**
  - Mandatory fields - Name, Date of Birth, Gender and ID
- **Patient visit**
- **Diagnosis**
- **Immunisation**
- **Allergy**
- **Medications**
- OT Notes / Procedure / Treatments
- Discharge Summary
- Laboratory Reports
- Radiology Reports

**Legend:**
- **Required**
- Depending on the type of services offered
- **Not applicable**
An example of what a dental clinic will contribute

A typical dental clinic will be required to capture & contribute these data to NEHR

- **Patient profile**
  - Mandatory fields - Name, Date of Birth, Gender and ID
- **Patient visit**
- **Diagnosis**
- Immunisation
- **Allergy**
- **Medications**
- **OT Notes / Procedure / Treatments**
- Discharge Summary
- Laboratory Reports
- Radiology Reports

**Legend:**
- Required
- Depending on the type of services offered
- Not applicable
A typical specialist clinic will be required to capture & contribute these data to NEHR

- **Patient profile**
  - Mandatory fields - Name, Date of Birth, Gender and ID
- **Patient visit**
- **Diagnosis**
- **Immunisation**
- **Allergy**
- **Medications**
- **OT Notes / Procedure / Treatments**
- Discharge Summary
- Laboratory Reports
- Radiology Reports

**Legend:**
- **Required** ● Depending on the type of services offered ● Not applicable
An example of what a clinical lab will be contributing

A typical clinical lab will be required to capture & contribute these data to NEHR

- **Patient profile**
  - Mandatory fields - Name, Date of Birth, Gender and ID
- **Patient visit** - applicable for walk-in patients
- Diagnosis
- Immunisation
- Allergy
- Medications
- OT Notes / Procedure / Treatments
- Discharge Summary
- **Laboratory Reports**
- Radiology Reports

**Legend:**
- **Required**
- Depending on the type of services offered
- Not applicable
An example of what a nursing home will be contributing

A typical nursing home will be required to capture & contribute these data to NEHR

- **Patient profile**
  - **Mandatory fields** - Name, Date of Birth, Gender and ID
- **Patient visit**
- **Diagnosis**
- **Immunisation**
- **Allergy**
- **Medications** – Discharge Medications only
- **OT Notes / Procedure / Treatments**
- **Discharge Summary**
- **Laboratory Reports**
- **Radiology Reports**

**Legend:**
- **Required**
- **Depending on the type of services offered**
- **Not applicable**
An example of what a renal dialysis provider will be contributing

A typical renal dialysis provider will be required to capture & contribute these data to NEHR

- **Patient profile**
  - Mandatory fields - Name, Date of Birth, Gender and ID
- **Patient visit**
- Diagnosis
- **Immunisation**
- **Allergy**
- **Medications**
- OT Notes / **Procedure / Treatments**
- Discharge Summary
- **Laboratory Reports**
- **Radiology Reports**

**Legend:**
- **Required**
- Depending on the type of services offered
- Not applicable
An example of what a hospital will be contributing

A typical hospital will be required to capture & contribute these data to NEHR

- **Patient profile**
  - **Mandatory fields** - Name, Date of Birth, Gender and ID
- **Patient visit**
- **Diagnosis**
- **Immunisation**
- **Allergy**
- **Medications** – Discharge Medications only
- **OT Notes / Procedure / Treatments**
- **Discharge Summary**
- **Laboratory Reports**
- **Radiology Reports**

Legend:
- **Required**
- Depending on the type of services offered
- Not applicable
Example of information needed for Patient Visit
• This information will be sent seamlessly from your system to the NEHR, based on system configuration.

<table>
<thead>
<tr>
<th>Admit / Visit Date</th>
<th>Discharge Date</th>
<th>Service</th>
<th>Facility</th>
<th>Visit Type</th>
<th>Movement Category</th>
<th>Discharge Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-Jul-2017</td>
<td></td>
<td>Family Medicine</td>
<td>NEW...</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>10-Jun-2017</td>
<td>10-Jun-2017</td>
<td>Endocrine</td>
<td>NUH</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>05-Jun-2017</td>
<td>05-Jun-2017</td>
<td>Endocrine</td>
<td>NUH</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>27-Apr-2017</td>
<td></td>
<td>ENDOCRINOLOGY</td>
<td>CGH</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>25-Apr-2017</td>
<td></td>
<td>Family Medicine</td>
<td>NEW...</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>03-Mar-2016</td>
<td>07-Apr-2016</td>
<td>General Orthopaedics</td>
<td>KTPH</td>
<td>Inpatient</td>
<td>Discharge</td>
<td></td>
</tr>
<tr>
<td>17-Sep-2015</td>
<td></td>
<td>Neurology</td>
<td>TSSH</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>12-Jun-2015</td>
<td></td>
<td>Family Medicine (FMC)</td>
<td>FMCU</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>12-Jun-2015</td>
<td></td>
<td>Family Medicine (FMC)</td>
<td>FMCU</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>03-May-2015</td>
<td></td>
<td>Neurology</td>
<td>TSSH</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>27-Mar-2015</td>
<td></td>
<td>Neurology</td>
<td>TSSH</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
<tr>
<td>06-Feb-2015</td>
<td></td>
<td>Family Medicine (FMC)</td>
<td>FMCU</td>
<td>Outpatient</td>
<td>Outpatient Visit</td>
<td></td>
</tr>
</tbody>
</table>
• Example of information needed for Ordered Medication
  • This information will be sent seamlessly from your system to the NEHR, based on system configuration.
  • This information will require your professional inputs.
  • Depending on the usability and design of your system, you might be able to use dropdown list, text search feature, or template to help you enter the information efficiently.
  • Medication name will be mapped to SDD
Steps to data contribution

- **Adopt** an IT solution that is **NEHR-ready** before the act comes into effect
- **Learn** to effectively use system and contribute data to NEHR

**Licensees who are currently:**

**On Pen & Paper**

- **Adopt an IT solution that is NEHR-ready**
  - IHiS will publish a list of vendors/systems that are NEHR-ready.

**Digitised**

- **Commercial Products: Check that your vendor is getting the system NEHR-ready**
  - IHiS will publish a list of vendors/systems and the stage of their NEHR-readiness.

- **MOH-Funded Products (e.g. GPConnect and NHELP)**
  - If you are using an MOH-funded system, IHiS will ensure that the system is NEHR-ready.
### Demonstrated ability to connect to the NEHR:
Commercial products and MOH-funded systems that already have capability to contribute at least one of the required data types to NEHR.

- CHCS
- Clinic Assist
- Epic
- GPConnect
- NHELP
- SCM

### Indicated interest to integrate:
Commercial products where the vendor has shown interest to implement the capabilities for data contribution to NEHR.

- 65Doctor
- Axiom IT solutions
- BizCMS (Bizpoint Clinic Management System)
- Clault
- Clinicea
- CompuGroup Medical
- Conduits
- Coobiz IT Solutions
- Dandem Labs
- Dental Decision Support System
- GCMS
- GenixPro
- GHB Clinic
- Gloco
- Hitachi Systems
- iCare360
- Ingot
- JONAS
- Lucence Online Test Management Portal
- Medi2000
- Medical Suite
- medi-Rekord
- Meditech
- Moxogo Health
- Napier HealthNova Health
- PaperPark
- Plato
- PractoRay
- Reste Laboratories / Reste Medical
- S-EMR 2.0
- SpiralCare
- Vanda CMS
- Vault Dragon
- Virtus Patient System
- VitalOne
- Welvue EHR

### Experienced integrating with other national systems:
Commercial products that have already implemented at least one SmartCMS capability to deliver the relevant e-services. Those with “*” have indicated interest to contribute to NEHR.

- eCMS
- GHB Clinic*
- Genesis eClinic*
- Gloco*
- Medical Suite
- Plato*
- S-EMR 2.0
- SUMMIT
- Vanda CMS
- Welvue EHR*
What support initiatives can you tap on?
Overview of support initiatives

- Private Hospitals
- General Practitioners
- Screening Providers
- Private Clinical Laboratories
- Private Radiological Laboratories
- Specialists
- Dental Providers
- Renal Dialysis Providers
- Nursing Homes / Inpatient Hospices
Support Initiatives – Technical Support

IT Vendors will do most of the “heavy lifting” here. IHiS will help your vendors help you.

- **Series of IT Vendor Workshops**
  – to equip vendors with understanding of the technical requirements and process to upgrade IT solution for data contribution

- **Guidance through Certification**
  – to provide information and tools to the vendors; publish a list of vendors and the stage of their NEHR-readiness in the certification process

You will need to make informed choice. IHiS will provide the information, guidance and advice.

- **Licensee Support Workshops & Consultation with Professional Bodies**
  – to provide guidance for licensees to make an informed choice of IT solutions and path to onboard and contribute data to the NEHR

- **Engagement & Online Support Resource**
  (www.ihis.com.sg/connectnehr) – IHiS will publish a list of vendors, the stage of their NEHR-readiness, FAQ on NEHR contribution, upcoming events and dedicated channels of contact for queries
Support Initiatives – Clinical Informatics Standards & Data Quality

IHiS will provide guidance and tools to facilitate your adoption of clinical informatics standards and quality data.

- **Workshops & Consultation Sessions** – to provide content guidance, best practices when implementing clinical informatics standards with your system

- **Standards Portal, Tool Kits & Templates** – to ease your transition and facilitate your adoption of clinical informatics standards and data quality.

Key objective is to minimise workflow changes while improving data quality for the continuity of care.
Support Initiatives – Financial Support

1. **Digitisation Grants** – Current government schemes that is administered by partners to support objective of encouraging digitisation to improve productivity

2. **MOH-Funded System** – Supports digitisation and will have capability to contribute data to NEHR. Applicable to GP, Nursing Homes and Inpatient Hospices through GPConnect and NHELP

3. **ECI Scheme** – Encourage early contribution of data to the NEHR and applicable to licensees using their own, or planning to use non-MOH funded IT systems
# Digitisation Grants

<table>
<thead>
<tr>
<th></th>
<th>SPRING Innovation &amp; Capability Voucher (ICV)</th>
<th>IMDA SMEs Go Digital (Enhanced iSPRINT)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To encourage development of business efficiency &amp; improve productivity.</td>
<td>Increase SME Productivity with Infocomm Adoption &amp; Transformation (iSPRINT) – Sector Solution</td>
</tr>
<tr>
<td><strong>Amount</strong></td>
<td>Voucher valued at $5,000 to offset purchase price from SPRING’s pre-approved integrated solutions list</td>
<td>Claim up to <strong>70% with amount up to maximum of $20k</strong> based on list of pre-approved solutions</td>
</tr>
<tr>
<td><strong>Support Scope</strong></td>
<td>Covers 2 years of subscription for subscription based solutions</td>
<td>Purchase of the first packaged solution listed under each solution category both Off-the-Shelf and Pay-Per-Use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covers 2 years of subscription for subscription based solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50% subsidy of the monthly recurrent cost for fibre subscription plan up to 24 months</td>
</tr>
</tbody>
</table>
Early Contribution Incentive (ECI) Scheme

- Incentives of S$20million to encourage early contribution of data to the NEHR

- One-time funding support scheme designed to help defray cost of system upgrades or increased subscription costs due to data contribution to the NEHR

- Applicable to licensees using their own, or planning to use non-MOH funded IT systems

- The first successful quality data contribution must not be later than 30th June 2019, after which the NEHR will need to receive three consecutive months of quality data in order to qualify for the ECI claim.
## Summary of ECI Scheme

<table>
<thead>
<tr>
<th>Type of licensee</th>
<th>Funding Perimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private Residential Care</strong> *(Private hospitals, <em>nursing homes/inpatient hospices)</em></td>
<td>Fund up to 40%* of cost of system upgrade for data contribution to NEHR, capped at $200k per licensee system</td>
</tr>
<tr>
<td><strong>Private Clinical Laboratory</strong></td>
<td>Fund up to 40% of cost of system upgrade for data contribution to NEHR, capped at $140k per licensee system</td>
</tr>
<tr>
<td><strong>Private Radiological Laboratory</strong></td>
<td>Fund up to 40% of cost of system upgrade for data contribution to NEHR, capped at $40k per licensee system</td>
</tr>
<tr>
<td><strong>Private and VWO Ambulatory Providers</strong> <em>(GPs, Specialists, Dental Providers, Screening Providers, Renal Dialysis Providers)</em></td>
<td>Flat $2.4k per licensee to co-fund increased IT subscription or associated costs due to data contribution to the NEHR</td>
</tr>
</tbody>
</table>

* MOH subvented nursing homes will be eligible for support under the NHELP (Nursing Home IT Enablement Programme).
How do you apply for ECI?

Step 1: Pre-Application

• Check that you are eligible to apply for ECI by filling up the Expression of Interest (EOI) form found here (www.ihis.com.sg/connectnehr/eoi). An engagement officer will get in touch with you.

Step 2: ECI Application

• If eligible, apply for ECI by filling up an application form*. You will be subjected to a list of requirements and conditions. If approved, you will be issued a Letter of Award.

Step 3: Data Contribution to the NEHR

• You will be brought through the on-boarding process. The first successful quality data contribution must not be later than 30th June 2019. An email notification will be sent to you upon receiving 3 consecutive months of quality data within 6 months from contribution start date.

Step 4: Claim Submission and Fund Redeem

• Proceed to submit claim form with supporting documents, within 2 months of email notification. Claim request will be processed and ECI funding will be provided via GIRO.

* Application form needs to be submitted latest by Dec 2018. This is to allow sufficient time to work out the technical details for data contribution.
We are listening...
Feedback and commonly asked questions…

1. What are the cybersecurity measures within the NEHR?

2. How do you contribute data to the NEHR? What options do you have?

3. Cost to digitise your clinic and integrate with the NEHR

4. Patient’s privacy and confidentiality should be respected

5. Must foreigners’ data be contributed to the NERH? Can they be exempted?

6. Medico-legal implications on the NEHR users…

7. Can the NEHR data be used for non-care purposes?
1. Cybersecurity measures (1/2)

What is in place within the NEHR?

- The NEHR is built with stringent access control features and multi-layered security defences to provide resilience and defense in depth against cyber-attacks. These security measures are subjected to regular independent audits, including security penetration tests.

- IHIS also works with CSA and other government agencies to regularly review and enhance these security measures. The cybersecurity measures will be strengthened as the cyber landscape evolves.
How we can help you play a part?

- No different from current, you are required to protect your patient records, including electronic records.

- We will increase efforts in raising awareness on good cybersecurity practices. The guidelines include being vigilant against cyberthreats, maintaining a range of security measures, such as the use of complex passwords, two-factor authentication and updated anti-virus security software to ensure that your systems and patient data are adequately protected against cyberattacks.

- These guidelines will be updated and shared periodically as the cyber landscape evolves to tackle new cybersecurity threats and risks. This will help ensure that all systems connecting to the NEHR meet a baseline level of security parameters.
2. Contributing data to the NEHR...

What options do you have?

- Current approach focuses on system-to-system integration; data will be structured and discrete

- Vendor solutions with simplified submission functionality is being explored

By when do you have to contribute data to the NEHR?

- Should the bill be passed in the Parliament, time will be given for operationalisation and the contribution will be mandated in phases progressively from 2019 to 2020.
3. Cost of digitisation and integration

Digitisation

- If your clinic is not digitised, you will need to adopt an NEHR-ready system. Cost will be incurred for hardware and software but financial support schemes are available to help you get started.

Integration

- Your vendor may need to upgrade the system you are currently using in order to meet the security and other technical requirements for integration with the NEHR. Early Contribution Incentive (ECI) is available to help you defray the cost for such enhancements.
4. Patient’s privacy and confidentiality (1/2)

- We respect patient's privacy and confidentiality. Opting out is an option given to patients.

- Where the patient has expressed his option to opt-out, the patient will undergo counselling to understand the implications. Data will be sent to the NEHR but blocked from view. We have encountered cases where patients choose to opt back into the NEHR. With the current policy position and system design, these patients who opt back in will have their records restored quickly and without data gap.

- Where the patient would like further anonymity, on a case-by case evaluation basis, he may be provided the option for his records not to be contributed to the NEHR. However, patient would need to sign an acknowledgement of the consequences of having an incomplete record, and if at any time he chooses to opt-back in, the records during the opt out period will not be contributed to NEHR.
To safeguard patient’s confidentiality, NEHR access is granted only to provisional individuals for direct patient care. Each access is logged and you are bound by law and professional ethics to keep patient health record strictly confidential.

Unauthorised access and modification of a patient’s electronic health record is also an offence under the Computer Misuse Act.

There are also routine automated and additional random checks done to ensure the validity of access to the NEHR.

Soon, patients will be able to view through the HealthHub website and app, the list of institutions and clinics that have accessed their health record.
5. Are foreigners included? Can they be exempted?

- Healthcare Services Bill does not differentiate between locals and foreigners.

- Foreigner patients’ data will be required for data contribution, regardless of their purpose of stay/visit:
  - Employment; Long-term Visit Pass
  - Transient visitors
  - Medical tourism

- Foreigner patients may opt out of the NEHR.

- Proposals being considered:
  - Simplified, online avenue for opt out
  - Advance notification where possible
6. Medico-legal implications

Medico-legal issues raised so far…

- **Contribution:** Data quality, timeliness of contribution, failure to contribute, privacy and confidentiality

- **Misuse:** Mis or Missed Diagnosis, Negligent use, 2o uses, insurance and employment

- **Access:** Inappropriate Access, Security of access, data breaches

*Working with professional bodies to organise medico-legal seminars/workshops this year.*
7. Non-care use of NEHR data

- Main purpose of use is for direct patient care

- NEHR data may be used for purposes in conjunction or where mandated by existing legislation, i.e. Reporting of notifiable diseases, police investigations, pre-enlistment act, coroners investigations etc.

- Taking earlier feedback into account, provisions will be made in upcoming HCSA bill to **legally prohibit access for purposes of employment and insurance**.
We want to be your partner on this journey...
Let us help you...

- Portal for Licensees: www.ihis.com.sg/connectnehr
- Portal for members of the public: www.ihis.com.sg/nehr
- Email: nehr.feedback@ihis.com.sg
- Hotline: 6594 2009 (during business hours)

Update your contact information with us so that we can reach you via email & SMS!
End of Presentation

Thank you
Real Stories from Providers and Patients
During emergencies, it can save lives

“Earlier this year, a patient was conveyed by SCDF ambulance to the Emergency Department after he had a severe headache and became unconscious. A CT scan revealed bleeding inside the patient’s brain. Since the patient was unable to communicate, we verified the identity of the patient and assessed his record in the NEHR and found that he was recently prescribed dabigatran from another institution, a new medication that affect blood. We were then able to prescribe the appropriate treatment and helped with the speedy recovery of the patient.”

- Dr Charmaine Manuais, Consultant, Tan Tock Seng Emergency Department
Benefits to Providers and Patients

- Improved Coordination, Improved Care

“Helps in patient management - tracing records easily, getting diagnoses of the patient seen at other institutions, as well as admissions and summary reports. Able to see and trend their blood test results, hence knowing how well the patient's disease is controlled. Knowing what medications patients have been prescribed.”

- Dr Theresa Yap, General Physician, Yang & Yap Clinic and Surgery

“I have many patients who wish to follow up with me in the clinic and usually they may not know the medications they are taking or are not provided with a copy of their latest test results. The NEHR assures patients that I know exactly what medicine and what dosages they are taking. I also know when they took their blood tests and their results.”

- Dr Raymond Yap, General Practitioner, Q&M Medical Family Clinic Serangoon Central
Improved Productivity

“The NEHR helps me get a better understanding of my patient’s medical history by providing me a holistic view of their past records. This is especially useful when I follow up with my patients or their next-of-kin telephonically. The NEHR has reduced the amount of time I need to spend getting patient information and gives me more time to attend to other patients. Having a common source of truth to the patient’s healthcare history also helps facilitate the transition of care between TTSH and my community partners.

- Ms Tang Mei Yee, Transitional Care Specialist, Department of Continuing & Community Care, TTSH
Improved Patient Safety, Better Health Outcomes

“The NEHR has helped a fair share of patients, especially elderly patients who cannot recall the medications/treatments done in other institutions. It also helps when patients arrive with different caregivers each time with incomplete history, and aids in tracing referrals when patients arrive for appointments without their referral letter.

I had two personal encounters that highlighted how important the NEHR was. I once lost my voice, and visited a clinic at my workplace, after having gone to a GP. There was no entry of what treatment or medications that I had been prescribed, and I had to resort to writing about the GP visit on paper. Another encounter was with my mom, whose multiple drug allergies were not reflected in the GP’s system, as it was not linked with the NEHR, and the GP prescribed the wrong drug. Thankfully my mother was aware of her drug allergies and the averted the disaster.”

- Ms Lee Shu Zhen, Urology Centre, SGH
(Also as patient & caregiver)