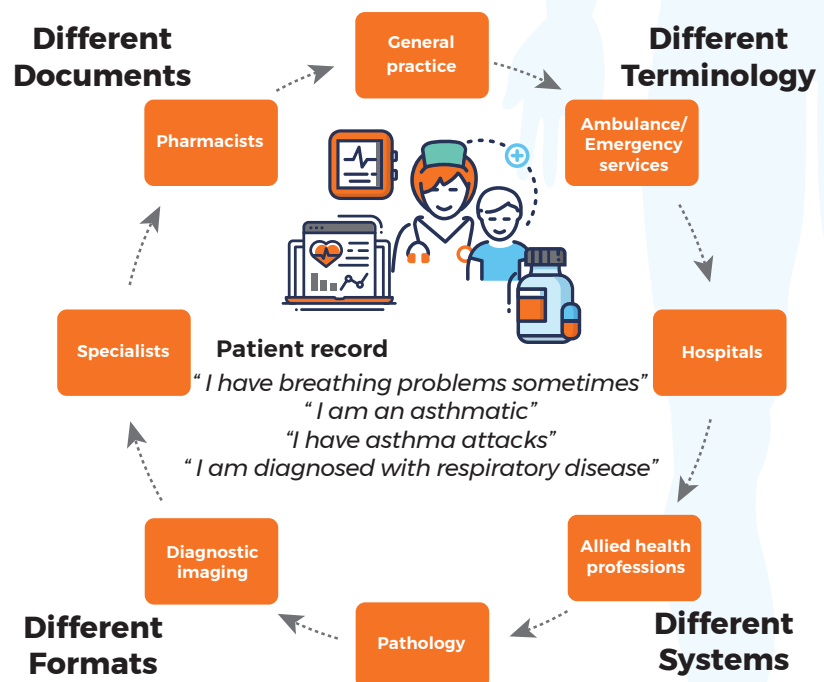# A COMMON LANGUAGE FOR HEALTH: IMPROVING ELECTRONIC HEALTH RECORD SYSTEM INTEROPERABILITY IN VIETNAM WITH SNOMED CT

INTEROPERABILITY CHALLENGES

To achieve **Smart Health[1] in Viet Nam, the current health systems need a common language to communicate and improve interoperability.** The definition of interoperability is that two or more systems (or components) are capable of sharing information **and of using the information exchanged.** To achieve that goal a set of standards must be implemented to ensure that the information is properly interpreted by a receiving system in the same sense as was intended by the transmitting system. In this context, terminologies play a very important role. Standard terminologies facilitate interoperability through the use of unique identifiers for specific clinical terms across specialties that are independent from the data structure of the message being exchanged. A range of terms used in patient records for a specific respiratory disease are in the figure on the right.

Different Documents

Pharmacists

General practice

Different Terminology

Ambulance/ Emergency services

Specialists

Hospitals

Patient record
" I have breathing problems sometimes"
" I am an asthmatic"
"I have asthma attacks"
" I am diagnosed with respiratory disease"

Diagnostic imaging

Allied health professions

Different Formats

Pathology

Different Systems

WHAT IS **SNOMED CT?**

SNOMED CT is a coded electronic clinical terminology. **SNOMED CT** is a collection of about 400,000 clinical concepts, associated with about 800,000 description terms for these concepts, and related to each other by a hierarchy (also known as a 'taxonomy') consisting of about 1,200,000 relationships.

SNOMED provides a large vocabulary of the terms healthcare staff need when entering information in an electronic patient record; it is organized logically using clinical links between terms to enable users to quickly find the right terms and support retrieval of patient data.

SNOMED covers symptoms, interventions, laboratory tests and results, family history, diagnosis, vaccine administration regimes, anatomy, organisms, devices etc.; it provides content for all healthcare professions and all healthcare specialties

WHAT CAN **SNOMED CT** BE USED FOR?

Representation of patient-based health information

Accurately recording the clinical situation of individuals

Indexing and retrieval of health information for health professionals

Retrieval to support analysis based on meaning. The SNOMED CT relationships support meaning-based retrieval of clinical data, which can be useful for creating specific clinical overviews or for aggregating data with specific characteristics (meaning).

Improving the accuracy of decision support applications

- Outcome measurement by monitoring progress over time
- Public health reporting – clinical registries, infectious diseases, cancer, bio-surveillance
- Reminders and alerts for preventative care e.g. diabetes and asthma care

WHAT ARE **THE BENEFITS?**

Vital information can be shared consistently within and across health and care settings, including information about diagnosis and procedures, symptoms, family history, allergies, assessment tools, observations, devices

Data can be exchanged electronically, without the need for re-entering clinical terms in the message or document, saving time and reducing typing errors

Comprehensive coverage and greater depth of detail and content for all clinical specialties and professionals

Better data supports clinical decision making

Standardization facilitates analysis to support more extensive clinical audit and research

Common language reduces the risk of misinterpretations of the patient health record in different care settings

WHO WILL USE **SNOMED CT?**

Healthcare professionals: end users of Electronic Health Records (EHRs) and Electronic Medical Records (EMRs). SNOMED is integrated into an EHR/EMR by system suppliers; this then enables clinical staff to enter appropriate terms from SNOMED in the EHR/EMR at the point of care. For example, recording a patient's diagnosis of asthma means the system can then correctly interpret this as a type of lung disease.

- System developers and vendors / suppliers
- System implementers (hospitals, clinics, laboratories, etc.)
- Information specialists
- Public health specialists
- Policy makers (government, professions, etc.)
- Researchers

WHAT IS **HAPPENING NOW**

With support from the **UK government's Better Health Programme**, the **Ministry of Health** has acquired a licence for SNOMED CT. It is currently undergoing a rigorous evaluation process to make it fit for use in Viet Nam.

The Better Health Programme Viet Nam team in collaboration with the eHealth Administration (EHA) is developing the piloting plan for SNOMED CT in several health facilities. Results will be disseminated in 2021 with recommendations for scaling up.

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THE BETTER HEALTH PROGRAMME (BHP)
IN VIETNAM

The Better Health Programme (BHP) is funded by the UK government's Foreign, Commonwealth & Development Office (FCDO) to collaborate with partner countries to strengthen local health system structures, processes, governance and capacities to improve quality of care and address the growing burden of non-communicable diseases (NCDs). In Vietnam, BHP is delivered by FHI 360 with management support from PwC. BHP Vietnam's assistance focuses on strategies to counter NCDs, education and training, and digital health initiatives.

In relation to digital health, BHP Vietnam is providing technical support to the Ministry of Health of Vietnam to build the digital health ecosystem, including the application of international standards for healthcare data exchange - Fast Healthcare Interoperability Resources (HL7 FHIR) among essential health information systems, and the introduction of the Systematised Nomenclature of Medicine - Clinical Terms (SNOMED CT) into the health service delivery system for effective clinical information exchange and interoperability.

How do I get more information?

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Footnotes

1. Smart Health - The latest National Plan approved in 2019 (Decision 4888) aims to achieve a comprehensive Smart Healthcare System within the next 5 years.