Proposed NHDD Structure

Static Health Info
- Demography
- Next-of-Kin
- Payor Detail

Patient Profile
- Blood Group
- Allergy
- Lifestyle
- Family History
- Disability
- Chronic Illness

Health Events
- Birth
- Child Health
- Vaccination
- Screening
- Adult Health (Men/Women)
- Acute Care
- Elderly Care
- Death

Encounter
- Encounter detail (Facility/Date/Provider)
- Past History
- Presenting Illness
- History of Present Illness
- Vital Signs
- Assessments
- Investigations
- Procesudures
- Diagnosis
- Medication
- Follow-up/Care Plan
- Documentation (referral/medical leave etc)

Generic Data
- ○ Date/Time
- ○ Height
- ○ Unit of Measures
- ○ Discipline
- ○ Department
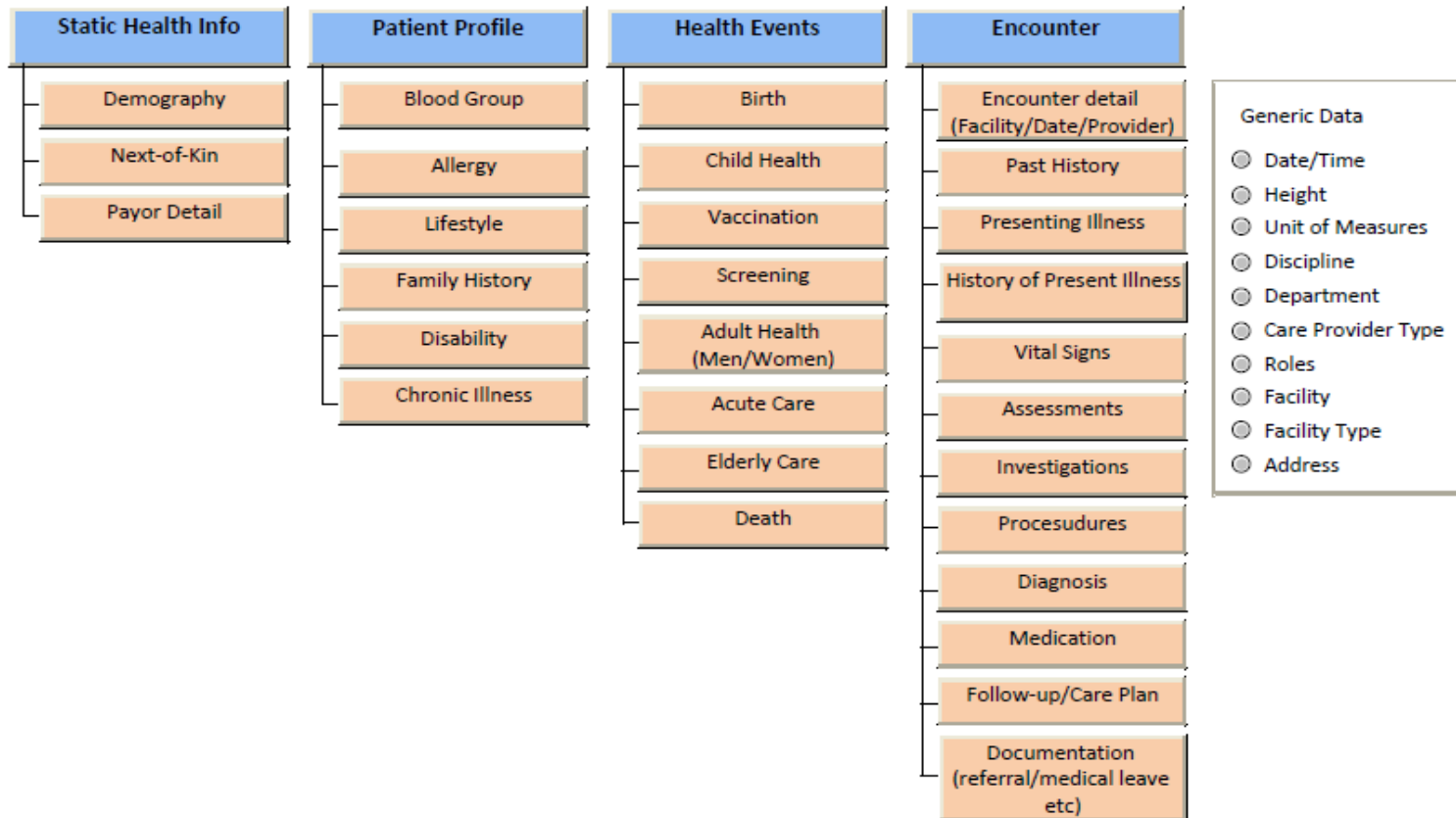- ○ Care Provider Type
- ○ Roles
- ○ Facility
- ○ Facility Type
- ○ Address

1. INTRODUCTION

1.1. Purpose

The purpose of this document is to provide standard definition and description of data elements that would be used in the capture of health & health related information.

1.2. Background

1.2.1. Vision for Health

The health services of the future are envisioned to provide a seamless care in a care network environment with individual playing a grater role toward his/her health. Therefore, the vision for health aspires that…

"Malaysia is to be a nation of healthy individuals, families and communities, through a health system that is equitable, affordable, efficient, technologically appropriate, environmentally adaptable and consumer friendly, with emphasis on quality, innovation, health promotion and respect for human dignity and community participation towards an enhanced quality of life." (Ministry of Health 1996)

1.3. ICT in Healthcare

The advent of Information and Communication Technology (ICT) has revolutionized the health care delivery system. Real time clinical information sharing has led to greater efficiency and effectiveness in person management. Rapid access to an individual's' 'total' record, including instantaneous retrieval of results facilitates decision making and improves quality and patient safety.

The Tele-health journey in the Ministry of Health started with the development of the Telemedicine blueprint and the National Tele health Policies. The Ministry of Health in leveraging the use of ICT as an enabler to improve the service delivery, conceptualized the Health System of the Future, characterized by the provision of continuous, seamless care tailored to the needs of the individual. The ICT initiatives that were subsequently planned were aimed at providing integration through the Life time Health record.

1.4. Health Informatics Standards

In ensuring that integration is made possible at the data level MOH has initiated on the development of Health Informatics Standards to be used by the health sector ICT stakeholders. Clinical information encompassing details, such as, diagnosis, surgical, laboratory and imaging procedures and

medications will be made available across healthcare settings to ensure enterprise wide person management. In the development and adoption of Health Informatics Standards for the country, references were made to several international and local standards as shown in Appendix 1.

2. NATIONAL HEALTH DATA DICTIONARY (NHDD)

2.1. NHDD: General Definition

Glossary of standardization data elements for health and health related information.

2.2. Definition of Related Terminologies

2.2.1.   Data Set is the collection of data elements.

2.2.2.   Data Element is the data item, with specific attributes and values. It will have standard field names, values, field properties and other relevant descriptions.

2.3. Objectives

2.3.1.   To make available a National Health Data Dictionary for use by individuals and organizations involved in the generation, capturing, storage and use of health and health related information;

2.3.2.   To provide semantic understanding of data elements used in health care industry;

2.3.3.   To ensure uniformity, reliability and consistency in the data to facilitate information gathering and sharing;

2.3.4.   To conform to nationally agreed protocols and standards;

2.3.5.   To be consistent with international standard wherever possible.

2.4. Strategy for Development

2.4.1.   Identify stakeholders

2.4.2.   Consensus driven methodology

2.4.3.   Reviewing existing standards

2.4.4.   Referring to appropriate reference

2.4.5.   Endorsement

        2.4.6.   Adoption and application

2.5. Rationale

    2.5.1.   The Nine Malaysia Plan (9 MP) has emphasized on reducing disease burden and improve health care delivery through consolidation

    2.5.2.   The Nine Malaysia Plan (9 MP) also proposes the a targeted approach by focusing on National Health Priorities

    2.5.3.   Lack of standardized data for evidence based planning and outcomes management

    2.5.4.   Need to have standardization of data elements and values to facilitate continuity of care through LHR services

    2.5.5.   The extent and quality of discharge summaries in MOH hospitals are varied

    2.5.6.   Currently, standardized format for outpatient care and management documentation is available for selected conditions, pregnancy and newborn care, perinatal care, child health care and diabetic and management

    2.5.7.   IDS returns for measuring outpatient morbidity is based on a crude method of calculation hence giving rise to data integrity issues

2.6. Approach

    2.6.1.   The scope and deliverables of National Health Data Dictionary was determined by larger consensus group

    2.6.2.   Special Interest Group (SIG) was formed to determine the standard data sets and elements for use in person record, health condition and event summary including hospital and outpatient visit.

2.7. Scope

The scope of NHDD includes the description of data elements within the following categories applicable to healthcare industries.

    2.7.1.   Person Record

           Person and person related demographics – refers to data elements describing person related details for identification purposes

2.7.2. Health Condition summary data sets includes data elements in relation to

    2.7.2.1. Birth Record
    2.7.2.2. Child Health Record
    2.7.2.3. Personal Health Record
    2.7.2.4. Blood Group & Rhesus Record
    2.7.2.5. Immunization Record
    2.7.2.6. Obstetric Record
    2.7.2.7. Health Screening Record
    2.7.2.8. Chronic Illness Record
    2.7.2.9. Surgical Record
    2.7.2.10. Family Illness Record
    2.7.2.11. Allergy Record
    2.7.2.12. Disability Record
    2.7.2.13. Lifestyle Record
    2.7.2.14. Occupational Risk Exposure Record

2.7.3. Event summary data set refers to data elements used in clinical and non-clinical documentation for wellness and illness episodes during the person visits to hospital or outpatient clinic

    2.7.3.1. Healthcare Facility Details
    2.7.3.2. Healthcare Provider Details
    2.7.3.3. Healthcare Encounter
    2.7.3.4. Health Assessment Record
    2.7.3.5. Orders And Results (Tests & Procedures)
    2.7.3.6. Clinical Data Summary
    2.7.3.7. Administrative Data

2.7.4. Condition specific data sets includes data elements in relation to information capture in the management of specific disease or conditions e.g. Diabetes

2.8. Data Specifications of NHDD

Data element :		
1	ID #	Version #
2	Date Created	
3	Date Updated	
4	Synonyms	Alternate names used for the data element
5	Translation of data element	Equivalent term in Bahasa Malaysia
6	Description	Defines the data element including the purpose
7	Data element type	Describes the purpose of the data

		element as mandatory, optional or recommended
8	Field property / Data Type for value	Numeric, alphanumeric, text, date, sign, symbols, derived / calculated
9	Field Size	Length of characters
10	Value selection / capture method	i) for alphanumeric data **:** Type in, select from a short list, select from a search list ii) for numeric data **:** barcode, scanning, sensing, swiping, type in
11	Values	Reference values according to national and international standards
12	Codes for values	Codes as per national or international standards
14	Value Source	Source where the data value/codes originate from.
15	Comments	Description of data element not included in item (4) to (13), or additional comments to qualify / explain / clarify

2.9. Look-Up Tables

The values for the codes as per national and international standards are provided in the look up tables

2.10. Clients

2.10.1. NHDD will be used as a basis for collecting data for Health Information Management

2.10.2. NHDD will be used by all solution providers in developing their system for HICT

2.10.3. For non-IT based hospitals /clinics the Medical Record Departments /personnel will utilize this information for submission of reports

2.11. Maintenance and Updates

2.11.1. The content of NHDD will be continuously reviewed and if any changes are found necessary, the SIG will convene to study the requirement and propose changes.

2.11.2. The change process will be coordinated by IDS Unit who in conjunction with the Telehealth Unit for version updates and maintenance.

2.11.3. For specific data sets where there are changes made by the expert group, e.g. immunization record, the changes would be sent to IDS to make the changes and version updates.

2.11.4. Telehealth Unit will be responsible for the review and changes in content of LHR data set. However, IDS Unit will be responsible for the version update.

2.11.5. All version updates will need to be approved by the Health Informatics Committee.

2.12. Organization Structure

2.12.1. IDS Unit will be the custodian for the development and maintenance of the NHDD

2.12.2. Telehealth Unit will provide domain and technical expertise for the development and review of the contents of NHDD

2.12.3. A NHDD Expert group with members comprise of all stakeholders will be responsible for the coordination of development and updating of standards across all SIGs

2.12.4. SIG for specific areas will be formed based on the topic, e.g. Diabetes SIG will be responsible for development and updating of diabetic data set and data dictionary

2.12.5. National Health Informatics Committee will be the national body responsible for the approval and endorsement of developments and updates to NHDD