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Mental Health in Digital India- EHR Perspective

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ABSTRACT

Noble mental health improves self-assurance and self-confidence and enables a person to love and motivate other people, daily life and surroundings. In this era of globalization, to maintain the mental health of society, it is necessary to adopt technological advancement and grow various mental health faculties. Digital India initiative of Government of India (GoI) for healthcare is taking a momentum through the new guidelines, policies and regulations. Use of EHR and EMR has been an important aspect to manage patient health information. NMHS discovered that approximately 80% of individuals affected had not received any type of care after the start of their disorder. The ill-health associated with these illnesses were severe in nearly 0.7% to 28.2% of individuals along with the significant socioeconomic effect on individuals who are affected. As its well-known psychiatric treatment is last longer as per the patient's prognosis and maintaining psychiatric patients record for long years is a crucial task by the patient's self and his caregivers. EHR serves as a well-documented record for patient's official treatment records & can be used for shielding malpractice, regulatory action or ethics complaint. MoHFW, GoI took national membership of SNOMED International and made SNOMED CT clinical terminology offered free-for-use in India. National Release Centre (NRC) for SNOMED CT was set up for pervasive acceptance and support of SNOMED CT in the nation. We may suggest that eHealth and EHR standard enabled clinical applications can improve rendering mental health services to patients and society.

Key Words: Mental Health, Digital India, Mental health EHR Perspective. EHR standard for India, EHR in Mental Health

INTRODUCTION

Noble mental health is essential for wealth and normal health. It improves self-assurance and self-confidence and enables a person to love and motivate other people, daily life and surroundings. When the individual is psychologically healthy, he/she can form positive relations, practice the abilities to reach their optimal level and deal with life's problems.

In this era of globalization, to maintain the mental health of society, it is necessary to adopt technological advancement and grow various mental health faculties. Such practices help to develop the domain and allow it to persist in a state of brilliance. Be it fire or be it technologically, no great discovery or innovation has come without overcoming problems and more so not without the rationality of a stable mind.¹

Person health record to be clinically significant it needs to be accessible and documented from beginning or birth. Each of these records may be irrelevant or relevant depending on

the present difficulties that the individual is suffering from. Thus, it becomes essential that these records be accessible, longitudinally organized as a time series, and be clinically significant to provide an outline of the many healthcare events in the life of an individual.²

The usage of Information and Communication Technology for healthcare services delivery, management and planning is known as Health Informatics (HI). It is applicable for four major multidisciplinary constituents; evolving ICT technologies, epidemiology and health management, health systems, and advanced statistics.³

Digital India initiative of Government of India (GoI) for healthcare is taking a momentum through the new guidelines, policies and regulations. Use of EHR and EMR has been an important aspect to manage patient health information. There is a clear vision to enable interconnected healthcare systems across the country. Many initiatives have been taken such as standardization of capture, storage, and exchange

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of health information, addressing confidentiality and safety concerns in the digital health world, building health data exchanges infrastructure.⁴⁻⁶

MENTAL HEALTH PERSPECTIVE OF INDIA

As per NMHS of India, 2015-16, it is estimated that psychological illnesses contribute to a major load of morbidity and ill health, even some increasing mortality. Mental, neurological and substance use disorders (MNSuDs) well-known to be on the rise in current years, consist of a wide diversity of minor anxiety, severe disorders like Schizophrenia and Bipolar disorders. Further, voluminous MNSuDs are both an origin and concern of Non-Communicable Diseases (NCDs). Most suggestively, NMHS discovered that approximately 80% of individuals affected had not received any type of care after the start of their disorder. The ill-health associated with these illnesses were severe in nearly 0.7% to 28.2% of individuals along with the significant socioeconomic effect on individuals who are affected.⁷

A frightening fact which has been recognized for several years, is the vast gap, repeatedly mentioned as the treatment gap, in the care of the psychologically ill in India. This is because of poor awareness among societies and the unavailability of resources. To accomplish the aim of high standards in the quality of care and enhanced results based on the principles of universal care and equity, health systems must be reinforced and made responsive to changing health urgencies and alarms.⁸

MENTAL HEALTH AND EHR STANDARDS

To propose, develop, tool, monitor, evaluate, and reinforce psychological health facilities in India, there is a need to recognize the clear problem of mental illnesses as well as the previous resources and services across the country. As the documents from existing studies had its limitations which often excluded its use for planning mental health services in India, the necessity for good quality data has been reiterated.⁸

Patient information is made available and accessible can simplify continuity of care, improved health result and improved decision support. One of the key requirements to enable data exchange and availability is having standardized HCIT applications/systems across the country.

With this vision to establish a system for interoperable Electronic Health Records (EHRs) of citizens, MoHFW notified the Electronic Health Record (EHR) Standards for India in September 2013. The informed standards were not only supported by professional bodies, regulatory bodies, stakeholders, but various technical and social commentators also. Reviewed EHR Standards for India were notified by MoHFW in December 2016.²

Significance of EHR Standards in Mental health

There are numerous benefits of collecting medical records such as enabling enhanced and evidence-based care, gradually more accurate and more rapid diagnosis leading to superior cure at lower costs of care, unnecessary investigations should be avoided, advanced analytics such as prognostic analytics for preventive clinical care, health policy decisions can be made on highlighted issues etc. This all ultimately can help in civilizing individual and public health. Sharing of medical records can only be possible through a set of pre-defined standards for information capture, storage, retrieval, exchange, and analytics that includes images, clinical codes and data is imperative.²

In the world Mental illnesses escalating a major cause of concern. Increased psychiatric illness in all age groups & economic background shocked the psychiatrists all over the world as per WHO statistics. Current gaps in treatment for typical psychiatric conditions in several states are pierced by NMHS 2016. It is concluded that for typical psychiatric conditions, there was an 85% treatment gap across the various states.⁸ A study conducted by Chaudhury PK et al to evaluate psychiatric morbidity in the community through the application of schedule for clinical assessment.⁹ As its well-known psychiatric treatment is last longer as per the patient's prognosis and maintaining psychiatric patients record for long years is the crucial task by the patient's self and his caregivers. EHR serves as a well-documented record for patient's official treatment records & can be used for shielding malpractice, regulatory action or ethics complaint.

ELECTRONIC HEALTH RECORD STANDARD AT A GLANCE

The notified EHR Standards for India (2016) were chosen from based on their international acceptance, availability, implement ability, suitability and applicability in India. The notification aims at standardization of identification, data capture, storage and transmission, etc. ensuring security and privacy (Figure 1).

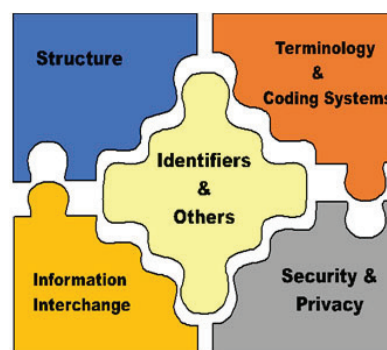


Figure 1: Key EHR Standard for Implementation.

Few key EHR standards specified in the notification for implementation in Healthcare application to achieve interoperability are listed below (Table 1):

Table 1: EHR standards for implementation in Healthcare application to achieve interoperability

Purpose	Key Standards
Clinical Terminology for clinical information capture	SNOMED CT
Coding and classification	WHO Family of International Classifications (ICD-10, ICF, ICHI, ICD-O)
Recording of observations, measurements, & tests	Logical Observation Identifiers Names and Codes (LOINC)
Event and message-based structured clinical and administrative information exchange	Electronic Data Exchange in Healthcare Environment by ANSI/HL7 V2.8.2-2015 HL7 Standard Version 2.8.2
Medical image storage and exchange	Digital Imaging and Communications in Medicine (DICOM) PS3.0-2015
MCI and PCI regulations for recording and exchanging health information	Relevant sections under Medical Council of India (MCI) and Pharmacy Practice Regulations, 2015 Notification No. 14-148/2012- PCI for the electronic exchange
Health data security and privacy	ISO/TS 14441:2013 Health Informatics standard

Note: For a complete list and details refer EHR standard for India Notification: 2016

EHR STANDARD IMPLEMENTATION INITIATIVES

MoHFW, GoI took national membership of SNOMED International and made SNOMED CT clinical terminology offered free-for-use in India. National Release Centre (NRC) for SNOMED CT was set up for pervasive acceptance and support of SNOMED CT in the nation. Further to support adoption and implementation of all the EHR Standard, NRC-eS is setup at C-DAC, Pune.

CONCLUSION

This article concludes that mental health professional should, directly and indirectly, involve themselves in designing, developing and using standard incorporated healthcare application in the facility. Health and EHR standard enabled clinical

applications can improve rendering mental health services to patients and society. There is a great need to sensitize the community about eHealth (especially telemedicine), and Health IT standards which can open many future research areas in mental health research and healthcare advancement. This review paper is anticipated to be a guide in the field of health IT in mental health and inspire the future generation for a more comprehensive study in the field of health IT advancement in mental health.

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