

Health Records Management

1. Master Patient Index (MPI)

Master Patient Index (MPI) or Enterprise Master Patient Index (EMPI) is a database maintained in healthcare facilities which allows patient matching, i.e. matching a patient with his/her unique set of data. The objective of this database is to minimize errors that occur in hospitals due to mismatch of patients that eventually lead to incorrect therapeutic interventions that may turn life-threatening. Within a healthcare organization, different departments often have different Medical Record Numbers (MRNs) for the same patient. Such organizations have Enterprise Identification Numbers (EIDs) that link all the different MRNs for a patient to one master record. Despite all measures to avoid errors in duplicating records and identity mismatch, such errors do occur resulting in a considerable risk to life and health (Just et al., 2016).

One of the most important causes of errors in the MPI database is errors related to inconsistencies in typing and formatting of patient names and other details. This eventually leads to patient mismatch and user search inconsistencies. This can be minimized by deep cleaning of the database at regular intervals, data standardization, and using spell-checking algorithms that can identify typos in patient records. User training is essential so that the same search criteria and record preparation is used across the entire organization. When there are errors in demographic data of patients, search queries do not work efficiently causing duplication of patient records. Therefore, there needs to be consistency in typing search strings so that the correct patient record is brought up for the required MRN (Hoover, 2020).

Two of the most common MPI errors are overlap and overlay. Overlap occurs when a single patient has multiple records in the database due to errors in typing patient details by different people. In such cases, all the duplicate records can be merged so that all patient details are brought under a single record and all errors are corrected. Overlay occurs when two or more patients have a single MRN, thereby merging and misinterpreting their medical information. Overlay is dangerous because it can lead to misdiagnosis and wrongly prescribing therapies for the patients. This type of error should be deeply investigated, the separate patients should be assigned their own MRNs, and all patient data should be separated appropriately (Biddle, 2015).

2. Data quality

According to the International Standards Organization (ISO), data quality is defined as the totality of characteristics and features of a data set that is capable of satisfying the requirements that arise from the intended use of the data set. Data quality is a measure of data correctness and accuracy, where all patient details are entered without content, spelling, or formatting errors in the database. Most healthcare facilities have standardized procedures to ensure high quality of patient data minimizing inaccuracy and incompleteness of medical records. Therefore, the two most important measures of patient data quality in healthcare are completeness and accuracy (Arts et al., 2002).

One of the most important effects of poor data quality is errors in clinical decision-making. According to a case report, the oxygen saturation levels of children having bronchiolitis were increased by 3% due to an error in the data management

system. This led to fewer hospitalizations due to misinterpretation of the oxygen saturation results and other operational consequences for the patients. Errors like these may also be caused due to mistyping or mishearing patient details and this can affect the judgment of a healthcare practitioner while viewing the incorrect medical records of patients. While sometimes, the clinical outcome may be insignificant, in most cases, it can be very serious sometimes leading to life-threatening situations (Ward et al., 2015).

Another case study reports the worsening condition of an elderly recently-widowed patient due to consumption of a wrong medication. There had been an error in updating the medication record for the patient; however, there was no indication on the patient records for the need of the wrongly given medication which is only used for severe mental conditions. No physician was able to identify this error while reviewing the patient records, which eventually led to extremely devastating health outcomes for the patient who dutifully kept taking the wrong medication. Therefore, poor data quality can lead to medication errors and severe long-term effects for the patients (da Silva and Krishnamurthy, 2016).

3. Authorization and consent related to patient information

In general, patient information is shared by healthcare facilities under conditions considered acceptable for purposes such as healthcare operations, payment, and treatment. However, if patient information needs to be used for purposes other than the ones mentioned above, authorization from the patient would be required. Such purposes could include marketing, promotions, and research. Failure to obtain

authorization from the patient before using his/her information may be considered a criminal act and may attract a heavy financial penalty (HIPAA Journal, 2021).

When obtaining patient authorization, the complete scope of possible uses of the patient information should be described. It should also be written in simple and clear language that the patient can understand. It should include the specific parties to whom the information will be disclosed and the specific details that will be provided to these parties. Where applicable, the reasons for the disclosure of patient information should also be described (HIPAA Journal, 2021).

Once the patient goes through and signs the authorization form or a representative of the patient signs the form, the patient has given his/her consent for use of their information for the purposes stated. Care should be taken that the patient details are only used for the described purposes by the mentioned parties. If there is any change to the purpose of use of patient details, the patient should be informed about this and re-authorization should be obtained before proceeding. If the intended use and the content on the authorization form are not the same, the healthcare organization that discloses the patient information can incur heavy penalties for not conforming to the rules surrounding authorization and informed consent of the patient (HIPAA Journal, 2021).

References

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