Quality Impact of the Master Patient Index

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The master patient index (MPI) is HIM service's lifeline to ensuring quality care in a healthcare organization. If MPI data are compromised, HIM's contributions to many healthcare functions are slowed down or brought to a halt.

Over time, the MPI has evolved from a simple index card file to a core component of the electronic health record. Today most MPIs are computerized and allow users to search for a patient among hundreds of thousands of records. The evolution that brought us to this point is continuing as the MPI proves to be a critical under pinning to the future of health reform.

Identifiers stored in the MPI enable the expanding network of computer systems to share and communicate information about the patient. With health information exchange, even more complex challenges emerge relating to interfaces, updates, and the rules governing privacy and access. Ensuring an organization MPI accuracy is central to making the pivotal transition to interoperability.

The Importance of MPI Accuracy

The MPI provides the critical link among disparate health information systems. Its primary purpose is to facilitate access to clinical and financial information contained in those systems. This is true whether the index is a local MPI, a multi-entity enterprise MPI, or a regional health information exchange. The same solid, unchanging HIM principles of accuracy, completeness, and data integrity, important in creating a quality patient identification system, also serve as the foundation of the electronic health record and health information exchange.

HIM professionals should ask themselves, "Is the accuracy, completeness, and integrity of the data in my organization's MPI at a demonstrated quality level?"

Many healthcare organizations aim to provide patient information quickly and securely to support the provision of healthcare services. As noted in a 2005 eHealth Initiative survey, "The goal of [health information exchange] is to facilitate access to and retrieval of clinical data to provide safer, more timely, efficient, effective, equitable, patient-centered care."[1] Without integrity of patient identification, goals cannot be accomplished for information access, patient safety, operational efficiency, compliance, security, and improved quality of care.

The ability to link all clinical and financial healthcare data to a single identifier is at the heart of a successful model for information exchange. The ability to accurately identify a patient is the cornerstone of the patient-centric healthcare model. With so much at stake, the quality of the identity management system is no longer a back office function. Now data quality and performance of the MPI is a foundational component of electronic healthcare systems.

Ensuring Accuracy Starts at the Top

Ensuring the quality of the MPI is a commitment, one that starts at the C-level to ensure it is funded and staffed. HIM professionals are in a position to influence organization decisions and direction, and they must be able to articulate the value of accurate patient identification systems to upper management. Two important talking points include:

- Patient identification systems accurately link disparate records within and across healthcare organizations.
- Accurate patient identification is important for patient safety, customer satisfaction, risk management, and operational efficiency. Duplicates and unlinked, overlapping records can lead to fragmented clinical information.

HIM professionals can take the following steps to ensure MPI accuracy and integrity:

- Advocate for an MPI assessment to determine a facility's actual duplication rate. Industry standards can also be used to estimate the extent of the problem. Most hospitals have 8–12 percent duplication within the facility MPI. The problem is compounded as databases become larger and the interrelationships of identifiers for the patient population become more complex. The rate of overlapping and unlinked identifiers within an enterprise MPI or a community network can be higher than 50 percent.
- Compare the facility's duplicate rate to the industry standard. Industry best practice indicates a duplicate rate of 2 percent, and most hospitals set a target of less than 5 percent. Determine the size of the gap between best practice and current state.
- Elaborate on specific risk and cost issues such as quality of patient care; operational effectiveness in registration, HIM, and the business office; compliance with standards and regulatory requirements; and adoption and performance of new technology (e.g., PACS and imaging).
- Prepare a return-on-investment or cost-avoidance business case to support the need for an ongoing identity management program. Address both risk cost and correction cost. Each duplicate record with current patient activity has the potential for cost from realized risk. The hospital may incur more than $100 per duplicate as a result of repeat lab tests, patient care errors, breach of confidentiality, and other liability risk. The cost to correct one duplicate ranges from $15 to $60, based on an average wage rate of $15 per hour and average correction time of one to four hours, with involvement from multiple departments in the organization (e.g., HIM, laboratory, radiology, and business office).
- Partner with information systems staff to include the patient identification function within the larger organizational plan for electronic health records and health information exchange. The plan should address more than technology. Policies on patient matching, display of information, authorization to share information, and data quality in general will be essential elements of a successful program.
- Educate leadership on the role of HIM in identifying and rectifying data quality issues in order to support accurate person identification and exchange of information. Use prior MPI projects, release of information processes, quality improvement initiatives, and involvement in electronic health record implementation as examples of HIM's strategic and tactical contributions.

The need for HIM influence in the development and use of patient identification systems is undeniable. The role of HIM includes being a patient advocate and a champion for data quality as health reform evolves. HIM principles that are important to management of patient identification systems and electronic records include data integrity and authentication, privacy and security, release of information, documentation standards, and data mining. HIM professionals influence data quality through the entire lifecycle of the record, beginning with data capture and continuing through interface, encoding, storage, and retrieval.

MPI Challenges Ahead

Healthcare IT has evolved to the point that it can support the complexities of regional health information organizations. The greatest challenges ahead will not come from technical interoperability—technical issues are perhaps the easiest to resolve. Ultimately, success will depend on people and processes.

Ongoing challenges can be expected in the areas of funding, data integrity, public policy regarding privacy and security, operational processes that foster collaboration, and identification management for patients and users. HIM professionals play a key role in defining and implementing data standards and integrating clinical, technical, and administrative viewpoints.

HIM frequently interacts with all constituents of the electronic health record—patients, providers, payers, and consumers—and serves as a catalyst for stakeholder input and system improvements. HIM skills can help with collaboration between competing stakeholders, interpretation of and compliance with regulations, policy and procedure development, quality management, and data integrity.

HIM can offer leadership within facilities, health systems, and the community. Data integrity and patient identity management are addressed at the local level, starting with attention to the quality of data in the MPI. There is much work to be done, and a myriad of commissions, task forces, and work groups are trying to address the issues still ahead.

Leadership is needed from healthcare information systems professionals and health information managers in a wide variety of settings with varied skills and experiences. There is vast opportunity to take action now and make a difference. Would your organization benefit from a renewed commitment?

Note

1. eHealth Initiative. “Emerging Trends and Issues in Health Information Exchange.” 2005. Available online at www.ehealthinitiative.org/files/eHI2005AnnualSurveyofHealthInformationExchange2.0.pdf.

Reference

QuadraMed. “What’s in a Name? For Starters, Success or Failure of the EHR.” White paper. May 2007.

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