Solving the Patient Matching Problem

On September 11, 2013, the Office of the National Coordinator for Health Information Technology (ONC) announced that it is sponsoring a collaborative project to help identify the common denominators and best practices for accurately matching patients with their medical records in use by health care delivery systems and Federal agencies. This effort is clearly driven by the critical nature of accurate patient identification as a prerequisite to enable healthcare information interoperability and high quality care.

The Problem

Current patient ID techniques based on enterprise master person index (EMPI) systems do a reasonably good job of patient matching. They use very sophisticated demographic matching algorithms to determine the probability that a given set of demographic data is associated with an individual in the organization's system(s). However, despite years of tuning these algorithms and refining the procedures that support them, it has proven to be impossible to eliminate matching errors. Industry reports consistently describe error rates ranging from 5% to 10%, and often considerably more.

In today's evolving healthcare environment, there are two fundamental trends that lead to the conclusion that existing EMPI demographic matching cannot meet the industry's needs for accurate identity matching:

- the growing number of disparate systems exchanging data within a single healthcare organization; and
- the expansion of health information exchanges (HIE) which leads to the need to manage very large patient populations.

If we are to effectively achieve the vision of broad health information exchange, the basic problem of correctly matching patients with their records within and among healthcare providers must be addressed.

The Consequences

Knowing that incorrectly associating a patient with a medical record can result in consequences of varying severity, imagine how those consequences become more dramatic when the error is echoed across the community:

- Staff time spent looking for missing information or trying to reconcile mismatched information
- The wasted time and resources spent on unnecessary duplicate tests
- Avoidable, adverse outcomes because care decisions are based on incorrect information

The results of patient identification errors not only impact the quality and efficiency of patient care, they also contribute to high medical costs. We need a simple, secure solution that dramatically reduces patient identity errors. We need a solution that is interoperable, inexpensive, integrates with existing EMPI systems, and easy to implement and maintain. That solution is available today from Global Patient Identifiers, Inc. (GPII).

Proposed Solution

While the ONC-sponsored effort to improve EMPI matching is laudable, it doesn't solve the problem. We need to augment existing EMPI probabilistic demographic matching with a fundamentally different approach that can actually achieve the goal of virtually zero matching errors.

GPII's Accurate Identity Matching (AIM) is a solution for all healthcare stakeholders to choose as a way to achieve accurate identification and information sharing across healthcare organizations. AIM, which is based on technology available today, allows organizations to use GPII numbering services behind the scenes to link patient records more accurately with existing EMPI technologies. That is, a unique data element is added into the EMPI to ensure an accurate match of a patient with his or her medical records.

We believe the time is right for GPII's AIM solution to meet the growing demand for accurate patient matching as a foundational component of an interoperable healthcare system. There is simply no other approach in the market today that is ready for pilot testing with any commercially available EMPI. Through our wide network of stakeholders and supporters, we hope to encourage ONC and their contractor, Audacious Inquiry (Ai), to consider AIM in its work and recommendations, expected to be delivered to ONC by the end of 2013.

For a more in-depth look at the solution to the person identification conundrum see:

Moving Toward Zero: How to Solve the United States Healthcare Person Matching Challenge