



Accurate Patient Identification Using Encoded Driver License Information

The Problem



Concerns over patient safety related to inaccurate identification have reached a crisis level. Misidentification of a patient can lead to a clinician obtaining an incomplete or incorrect medical history. Healthcare providers overwhelmingly agree that this creates an unacceptable increase in the risk to the patient. In response to this growing concern, the National Patient Safety Foundation at the AMA, with sponsorship from the Department of Veterans Affairs and the Agency for Health Care Policy Research, convened a workshop to focus on all patient safety issues. A primary goal stated in the workshop was: “How do we make progress on patient safety in the longer term” and “What are the ‘low hanging fruit’ that we can pick to have an impact quickly?”

Even with tremendous strides in technology, most admitting/registration systems provide inadequate safeguards to ensure proper patient identification. In spite of the wide array of sophisticated soundex procedures, simple spelling or keying errors often prevent accurate identification. In a climate of drastically reduced reimbursement and an increased demand for services, the financial burden to reconcile identification errors is staggering. The healthcare industry has already spent untold millions of dollars attempting to solve the problem and is predicting it to be a top priority in the coming years.

The Solution



Currently, one half of the fifty United States and one half of the Canadian provinces store usable identification information on their motor vehicle driver permits in the form of a magnetic stripe or 2D barcode. The majority of the remaining states and provinces are currently considering or has already approved adopting this standard. Without a single keystroke, BASEscan enables registrars to accurately identify patients who already exist in the person index simply by scanning or swiping their driver license. Unlike standard patient lookup capabilities provided by most ADT systems, BASEscan uses all the information encoded on the driver license to intelligently locate likely matches in the patient index using probabilistic scoring algorithms. This eliminates possible communication, spelling and entry errors, ensuring accurate identification of the patient. Accurate identification is the proverbial “low hanging fruit”, the first step in safeguarding the patient, clinicians, and hospital. It ensures that clinicians are aware of each patient's complete medical history. Accurate identification also prevents fragmentation of a patient's medical history under multiple identifiers, eliminating the need for costly cleanup projects.

Key Benefits and Features



- **Improved Accuracy during Registration**

Errors can occur in the exchange of information between the patient and the registrar. The patient may have a long, complex, or international name that is easily misspelled at the time of the patient lookup. Or, the patient is unable to communicate their identity succinctly due to a language barrier or physical impairment. Patients with very common surnames, such as Smith, Gomez, or Li present a challenge in that the search of the index returns an extensive list of similar names from which the registrar must select. Even when the communication is perfect and no errors are introduced in entering the search criteria, a changed surname or a misspelled name from a prior registration can jeopardize proper identification. BASEscan eliminates these problems by using all the encoded digital information contained on the driver license or other government issued identification card as its search criteria.

- **Improved Efficiency during Registration Process**

BASEscan automatically activates whenever an id is scanned. It triggers logic developed by Positive Access® that interprets the digital information contained on the magnetic stripe or 2D barcode into a usable format and initiates the matching algorithms. If matches are located in the patient index, they are shown to the registrar for consideration. Otherwise, the registration is routed automatically to the host system's new-person pathway and the information obtained from the driver license is loaded into appropriate data fields. The process is extremely fast, reduces key strokes, and eliminates potential communication and spelling errors.

- **Source of Accurate and Dependable Information**

Drivers are required to provide documentation to prove who they are and must acknowledge that the information is accurate. Most states also mandate that the data contained on the driver license be kept current. A person is required to obtain an updated license whenever they change their address or marry and change their name.

- **Comprehensive Identification of Duplicates**

Using a sophisticated probabilistic scoring algorithm, BASEscan identifies returning patients by analyzing the data obtained from the driver license against the full Master Patient Index. Medibase's proven algorithm determines whether there is sufficient evidence of a match. Data normalization, phonetic mapping and transposition checking are just a few techniques employed to maximize the chances of finding an existing patient or guarantor. This process quantifies the cumulative evidence into a single score in order to determine which pairs are presented to the registrar as potential matches.

- **User Friendly Presentation**

BASEscan presents possible matching records to the registrar sorted with the most probable match at the top. Search criteria captured by scanning the driver license, military id, or other scanned id is shown at the top of the screen. Colors visually cue the reviewer as to the relationship of each data element to that of the scanned information. The colors green, yellow and red are used in a "traffic light" approach to illustrate identically matching data, partially matching data, and data conventions that imply the pair may represent different individuals. Warnings are displayed when there is a possibility of twins or family members. From the online review screen, the user can select an existing patient or elect to continue the registration as a new patient.

- **Non-invasive Integration into the Registration Process**

BASEscan integrates non-invasively into existing registration systems. Once new patient information is scanned, BASEscan analyzes the information to determine if there is sufficient evidence of a matching person in the database. Only when sufficient evidence is detected does the system intervene to inform the registrar.

- **Accountability Reporting**

A major deterrent to accurate patient identification is complacency. BASEscan provides an excellent audit trail that reports all instances of suspected duplicate record generation. The report shows the action taken by the registrar along with the data that was obtained from the scan and the data for the most likely match. Information is presented in a clear side-by-side format and illustrates the effectiveness of the tool, providing tangible evidence of the benefits.

Sample Notification Screen



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