Arizona Health Care Cost Containment System
Patient Lookup: Review of Best Practices

Problem Statement

Determine the best practices for Patient lookup functions, balancing accuracy and system usability with the need to ensure compliance with privacy and security standards.

Methodology

The Patient Search practices of the following HIEs were reviewed via phone interview and website research:

• WI ED Linking Project	• Inland NW Health RHIO
• CalRHIO ED Linking Project	• MA-SHARE
• State of LA (Viewer)	

Patient Lookup functionality within the following EMR/EHR Systems was reviewed via product demonstration and website research:

• Care 360/Quest Diagnostics	• BC Healthcare Client Identity Management
• Rx Accord	• Indian Health Services
• NeoTool	• Regenstrief in Africa
• SmartTech	• VistAWeb (Veteran's Administration)

Additional research included:
- Review of current AHCCCS PMMIS/Eligibility search criteria
- Review of the Patient matching methodology recommended by the Connecting for Health Framework and Initiate Systems
- Review of the Find a Patient Design Guidance documentation from Microsoft, developed in partnership with the National Health Service (NHS) in England
- Review recommendations for patient lookup from the following organizations:
  - Certification Commission for Healthcare Information Technology (CCHIT)
  - American Health Information Management Association (AHIMA)

Findings

The approaches to Patient Search mechanisms implemented by healthcare organizations, vendors, and health information exchanges across the country represent a delicate balance of what often appear to be competing interests:
- Ease of Use – Minimum number of criteria likely to be available at time of search
- Efficiency – Rapid results
- Accuracy – Finding the desired patient
- Security – Authenticated user types who are "allowed" to search
- Privacy – Sharing data with only those who have a need to know

As a result, a variety of lookup strategies have been deployed, ranging from a single unique identifier (e.g., AHCCCS) to combining four (4) or more criteria in order to increase accuracy and efficiency of the lookup function (e.g., Connecting for Health or Initiate Systems). Commercial software vendors typically offer a configurable solution that will support a variety of local Privacy and Security practices. All solutions reviewed offer more criteria for data entry than are actually required. This is related to the fact that depending on the clinical situation, the known or available data will vary.

- AHCCCS: The User is able to search for a Patient using only the AHCCCS ID or SSN. If neither of these criteria is available, the combination of Patient Last Name, DOB, and Gender are used.
- EMR/EHR: No obvious best practice. These systems often offer "configurable" search criteria, supporting the ability for each customer to follow existing organizational policies.

- Most EMRs are used within a single organization (one health system, facility, or one practice with one or more locations) and data is not shared with outside entities.
  - Patient look-up via a medical record number (MRN), patient name, or other criteria, such as date of birth, gender, or social security number is supported.
- HIE without Viewer: Most HIEs have not developed front-end Viewer applications that require a mechanism for Patient lookup. Data only is exchanged between organizations with existing clinical applications. In this manner, Patient search originates from the EMR system of the Provider.
- HIE with Viewer: Typically at least five (5) parameters are available to search for a Patient.
  - All of these HIEs include the following four parameters: Last Name, First Name, DOB, and Gender.
  - All use at least one additional identifying field, which varies depending on the HIE. These fields include Medical Record Number (MRN), Social Security Number (SSN), Insurance Identifier, Address, or Zip Code.

Recommendations:

Basic Search
For the AHCCCS Viewer, the Team recommends two approaches to the Patient Search function depending on whether the User has the AHCCCS ID (the unique identifier for the Medicaid population in Arizona) available:
- When the AHCCCS ID is known, only two (2) fields are required. The AHCCCS ID plus one of the following is required to prevent phishing:
  - Last Name
  - DOB
- When the AHCCCS ID is unknown, three of four variables are required to locate the Patient of interest. The four variables that will be available are those most commonly used across all organizational search mechanisms. Recognizing that known data will vary, the following combinations are supported:
  - Combination A
    o At least the first four (4) characters of Last Name
    o Full First Name
    o Date of Birth
    o Gender
  - Combination B
    o Full Last Name
    o First two (2) characters of First Name
    o Date of Birth
    o Gender
- The User will have a way to indicate when the Last Name has fewer than four characters or the First Name has fewer than two characters.

Advanced Search
Additional variables will be available through an Advanced Search option. These variables include:
- Medical Record Number plus Facility/Practice Name (to be selected from a list)
- Insurance ID #
- Middle Name
- Last four (4) digits of SSN
- Address (can be a string)
- Zip Code

Training regarding the value of using more, rather than fewer, variables as a means of increasing efficiency and accuracy will be provided using real-world examples. Training will emphasize the fact that when minimal criteria are entered, multiple re-searches are typically executed in an attempt to refine the results.