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Patient Matching – What's in the Pipeline for 2014?

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About eHealth Initiative

- Since 2001, eHealth Initiative is the only national, non-partisan group that represents all the stakeholders in healthcare. Represent over 15 different stakeholder groups and 39 states across the nation.
- Mission to promote use of information and technology in healthcare to improve quality, safety and efficiency.
- Last year, over 4500 individuals attended our events and 500+ individuals participated in our national councils and workgroups
- eHealth Initiative focuses its research, education and advocacy efforts in four areas:
 - Data and Analytics
 - IT Infrastructure to Support Accountable Care
 - Technology for Patients with Chronic Disease
 - Data Exchange & Interoperability



Agenda

4:00 – 4:05 PM Welcome and Introductions

- Moderator: Mark Segal, Vice President of Government and Industry Affairs, *GE Healthcare IT*

4:05 – 4:40 PM eHI's accomplishment and what's Next in Meaningful Use, Health IT

- Beth Just, President & CEO, *Just Associates Inc.*
- Craig York, Program Director, *Argo Data*

4:40 – 4:55 PM Q&A Discussion

4:55 – 5:00 PM Updates and announcements of eHI future events.

5:00 PM Adjourn



Beth Just, MBA, RHIA, FAHIMA



CEO

Just Associates, Inc.



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Craig York



Program Director, Healthcare
ARGO Data



Industry Update on Patient Matching ONC's Preliminary Report

January 16, 2014
eHealth Initiative Webinar

Agenda

- ◆ Introduction of Speakers
- ◆ ONC's Patient Matching Initiative
- ◆ Industry Challenges
- ◆ ONC's Initial Findings
- ◆ Recommendations to the ONC
- ◆ Industry Solution(s)

Guiding Principles¹ of ONC's Patient Matching Initiative

- Patient safety is driving force for improvement in patient matching
- The real-world impacts on the workflow of administrative and clinical personnel must be carefully considered
- Patient matching is a complex problem; therefore, improvements will be multifaceted and incremental with no single solution or step that is final
- Potential improvements should apply to all sizes and types of provider settings, a range of health IT adoption levels and a broad set of “use cases”
- Building a solid foundation for patient matching across institutions will ease the implementation burden of Meaningful Use Stage 3, while allowing for future innovation

¹ONC's **Update on Patient Identification and Matching Activities**, HIT Standards Committee, December 18, 2013

Goals² of ONC Patient Matching Initiative

- Improve patient matching based on an assessment of current best outcomes from a cross section of entities performing patient matching or that have a stake in the effectiveness of patient matching
- Identify key identifying attributes which can be standardized and consistently relied on for matching patients
- Identify processes and/or best practices to support improved patient matching
- Pursue improvements that will have the broadest impact against a range of matching scenarios / use cases

²ONC's Update on Patient Identification and Matching Activities, HIT Standards Committee, December 18, 2013

Project Overview³ ONC Patient Matching Initiative

The project was designed to be an inclusive and transparent review of the spectrum of works to date. It included an in-depth formal environmental scan and informal discussions with a broad set of stakeholders.

The key project components included:

- ◆ Literature review
- ◆ Environmental scan
- ◆ Initial draft recommendations
- ◆ A series of review and feedback loops

³ONC's Update on Patient Identification and Matching Activities, HIT Standards Committee, December 18, 2013

The Identity Challenge



Blood Work

Name: Hexom, Elizabeth
Sex: F
DOB: 11/03/1981
ID: D234501



Pediatrics

Name: Hexom, Baby Girl
Sex: F
DOB: 03/11/1981
ID: D234112



Burn Unit

Name: Hexom, Elizabeth
Sex: F
DOB: 03/11/1981
ID: K10345621



Orthopedics

Name: Hexom, Liz
Sex: F
DOB: 03/11/1981
ID: D495611



Name: Barton, Elizabeth H
Sex: F
DOB: 03/11/1981
SSN: 218-92-4694



Pharmacy

Name: Hexom, Elizabeth
Sex: F
DOB: 03/11/1981
ID: IA23573312



Maternity

Name: Barton, Beth H
Sex: F
DOB: 03/11/1981
ID: D20245356



Podiatry

Name: Hexom, Liz
Sex: F
DOB: 03/11/1981
ID: G236451



Surgery

Name: Hexom, Liz
Sex: F
DOB: 04/12/1981
ID: K10789341

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Most Common MPI Integrity Issue

- ◆ Duplicate — more than one entry or file for the same person in a single facility level MPI.
- ◆ Often “multiples” exist



Baby Girl
Hexom



Liz
Hexom

Duplicate

.01 – 57%



Beth
Hexom



Beth H
Barton

Multiple

“Building an Enterprise Master Person Index” (AHIMA Practice Brief) January 2, 2004

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... and also

- ◆ **Overlap** — more than one MPI entry or file for the same person in two or more facilities within an enterprise

4 – 74%



**Elizabeth
Hexom**



**Liz
Hexom**



**Beth
Hexom**



**Beth H
Barton**

"Building an Enterprise Master Person Index" (AHIMA Practice Brief) January 2, 2004

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Most Severe MPI Issue

- ◆ **Overlay** — one MPI entry or file for more than one person (i.e., two people are erroneously sharing the same identifier)



Bill Scott
05/04/1960

William Scott
04/05/1990

"Building an Enterprise Master Person Index" (AHIMA Practice Brief) January 2, 2004

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Overlaid Records

◆ On the increase

- ◆ Anecdotally found
 - ◆ Bills sent to wrong patient
 - ◆ Caught during MPI Cleanup
 - ◆ Clinician (or patient) identifies during subsequent treatment



Maria
Bonita
Garcia
10/18/1999

Maria
Bernice
Garcia
10/18/1999

"Building an Enterprise Master Person Index" (AHIMA Practice Brief) January 2, 2004

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Preliminary Patient Matching Recommendations

- ◆ ONC's patient matching initiative launched in Sept. 2013
- ◆ Hired Audacious Inquiry to complete the study
- ◆ Preliminary results presented on Dec. 16, 2013 in Washington DC
- ◆ Speakers are not representing ONC or Audacious Inquiry

Audacious Inquiry's Preliminary Recommendations to the ONC

- ◆ Standardization of Patient Identifying Data Attributes
 - ◆ Standardize format
 - ◆ Complete population of key data attributes
- ◆ Certification criteria for EHR technology
 - ◆ Require consistent format/data capture of key attributes; e.g. historical addresses
- ◆ Additional, non-traditional data attributes for patient matching
 - ◆ Such as email address, mother's/father's name, place of birth, driver's license, eye color

Audacious Inquiry's Preliminary Recommendations to the ONC

- ◆ Record Matching Algorithm for Benchmarking
 - ◆ Open source algorithm for vendors to test their algorithm
 - ◆ Utilize by vendors without an algorithm
- ◆ Identifying Duplicates
 - ◆ EHR Certification criteria to require vendors to generate usable duplicate reports
- ◆ Convene Stakeholders – Develop Best Practices for
 - ◆ Identity Verification
 - ◆ Patient Matching Process
 - ◆ Data Governance

Audacious Inquiry's Preliminary Recommendations to the ONC

- ◆ Consumer Engagement

- ◆ Raise Awareness among Patients of Importance of Correct, Current Demographics

- ◆ Develop and Disseminate Education and Training Materials on Patient Identity Management Best Practices

- ◆ Work with Healthcare Professional Association and Safety Assurance Factors for EHR Resilience (SAFER) Guide

Additional Recommendations to Consider

- ◆ Additional Patient Identity Data Elements
 - ◆ Use in record matching algorithms
 - ◆ Last 4 of SSN
 - ◆ Weight last 7 digits of SSN; Higher weight if all 10 digits match
 - ◆ All available phone numbers
 - ◆ Previous names (not only maiden name)
 - ◆ Insurance ID; NOK/Guarantor names
- ◆ Eliminate auto-linked false positive matches
 - ◆ Getting it wrong is worse the not getting it all

Additional Recommendations to Consider

◆ HIO Responsibilities

- ◆ Data sharing agreements include data governance requirements and monitoring/reporting accountabilities
- ◆ Train HIO staff on data management responsibilities and duplicate record validity techniques
- ◆ Report same-system duplicates to Data Trading Partners
- ◆ Duplicates/overlays – correct in source system and electronically communicate to HIO system

◆ Certification criteria of EHR systems won't address many patient identity issues

- ◆ Many providers use registration/scheduling systems that are separate from their EHR

Additional Recommendations to Consider

- ◆ Advanced Algorithms are needed – basic and intermediate algorithms won't catch most duplicate records
 - ◆ Over half of all duplicate records have a discrepancy in more than one of the following key patient identity data fields:
 - ◆ Last Name; First Name; Middle Name
 - ◆ Date of Birth; Gender; SSN
- ◆ Providers and HIO's complete periodic analysis of their data to identify duplicates missed by their current algorithm
- ◆ Support congress lifting ban to study effectiveness of a unique patient identifier

Summary

- **ONC has identified patient matching as a national problem**
 - Majority of systems today do not do a good enough job matching patient records
 - Proper patient identification is a key stone of patient safety, analytics, fraud prevention and reducing waste
- **2014 is a year for further study and policy planning to determine the extent for inclusion in MU Stage 3 (2016)**
 - ONC appears to favor having some form of matching requirement
 - Standardized fields in EHRs for use in matching seems likely
 - Matching performance (accuracy) benchmarking seems likely
 - Advanced algorithms are available but traditionally have been fairly expensive – ONC looking for balance between driving improved performance at a cost that can be widely adopted

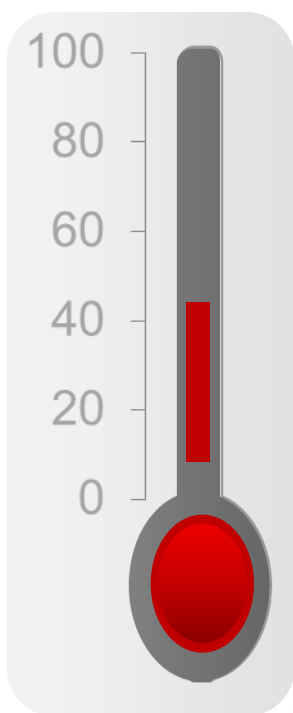
Summary

◆ What you should do

- ◆ Examine advanced algorithm options which can reduce waste and risk in your organization today
- ◆ Ensure your vendors are committed to meeting Stage 3 requirements
- ◆ Build a strong data governance program within your organization
 - ◆ Create a data governance committee to oversee program
 - ◆ Hire credentialed & experienced staff to manage program
 - ◆ Measure data integrity error rates
 - ◆ Follow up!
- ◆ Consider process improvements in registration and scheduling areas – educate and train
- ◆ Continue to monitor ONC progress

Record Matching Algorithms

(10% Average Duplicate Rate)



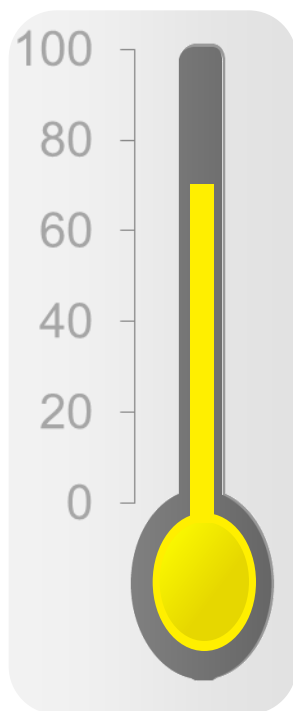
■ **Basic Duplicate Detection**

- Only finds up to 30% of existing duplicates
- Missing 70% of existing duplicate records
- Most financial (registration & scheduling) systems

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Record Matching Algorithms

(10% Average Duplicate Rate)



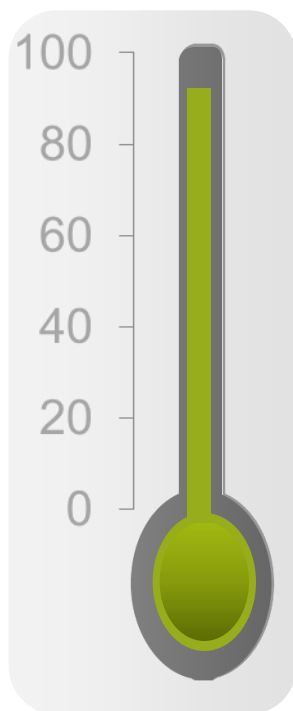
■ **Intermediate Duplicate Detection**

- Un-tuned finds up to 50% of existing duplicates
- With tuning finds up to 70% of existing duplicate records
- Missing 30% to 50% of existing duplicates
- Many of the integrated clinical and financial systems

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Record Matching Algorithms

(10% Average Duplicate Rate)



- **Advanced Duplicate Detection**

- Self-tuning finds up to 99% of existing duplicates
- Misses very few existing duplicates
- Best of breed EMPI systems

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Thank you!

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Discussion

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February 12, 2014 | Washington DC

eHI MEMBER-ONLY EVENT.

- Network with high level officials from Congress and Government Agencies
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- Register here: <http://ehidc.org/events-landing/gar-2014>
- Questions? Contact nadeen.siddiqui@ehidc.org



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