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D I S C E R N I N G Identities

Overcoming the Challenges of Dirty Data: Assuring Accurate Patient Identity

CtHiMA
AHIMA Affiliate
Connecticut Health Information Management Association

CTHIMA Annual Meeting
September 17, 2017

Learning Objectives

- ✓ *Appreciate* MPI integrity challenges
- ✓ *Recognize* importance of accurate patient identity
- ✓ *Understand* operational impacts
- ✓ *Know* how to mitigate issues

MPI – Foundational Backbone

- EHR
- Compliant coding/billing
- Analytics
- Legal medical record
- Research
- HIE

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MPI Integrity Challenges

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Challenges

- Mergers/Affiliations – accelerated timelines
- System conversions
- Sub optimal matching algorithms
- Additional data attributes needed
- Fear of identity theft

Challenges

- Assessing “current state” MPI data
- “Shell” records
- ACO/payer files lack key data
- IT Projects – minimal stakeholder input
- Registration silo’s

How did MPI data get so dirty??

- Legacy data silos
- Data conversions
- Diverse data – 80% unstructured
- Varying data field formats
- Lack of standardization
- Inadequate messaging configurations

Data Capture Dilemma's

Demographic data:

- Changes (i.e. last name)
- Incomplete (i.e. middle name)
- Inaccurate (misspellings, transpositions, typographical errors, nicknames)
- Sites collect different data points
- Addresses not standardized
- Name swaps
- Temporary registrations

MPI Data Discrepancies

- ***JA* study w/ College of St. Scholastica (398,939 confirmed duplicate pairs)**
  - Data discrepancies due to blanks/defaults/typos in key fields – 95%
  - MN and SSN – most frequent mismatching fields
  - Name field – still huge issue

- **~28%* of all records within an Enterprise Master Patient Index have errors in at least one of five core patient identifier fields:**
  - Last Name, First Name, Date of Birth, Social Security Number or Gender

http://perspectives.ahima.org/why-patient-matching-is-a-challenge-research-on-master-patient-index-mpi-data-discrepancies-in-key-identifying-fields/

Duplicate Patient Records

The gift that keeps on giving!

Duplicate Existence Rates

Hospitals

.01% – 57%

IDN's

4% – 74%

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QUALITY AND OPERATIONAL IMPACTS of "Dirty" MPI Data

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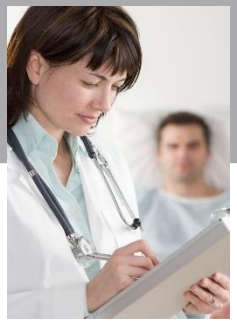
Quality of Patient Care



- Repeat diagnostic tests - original results not found
- Drug interaction risks - medications unknown
- Critical diagnoses & treatment delays
- Unnecessary invasive procedure exposure

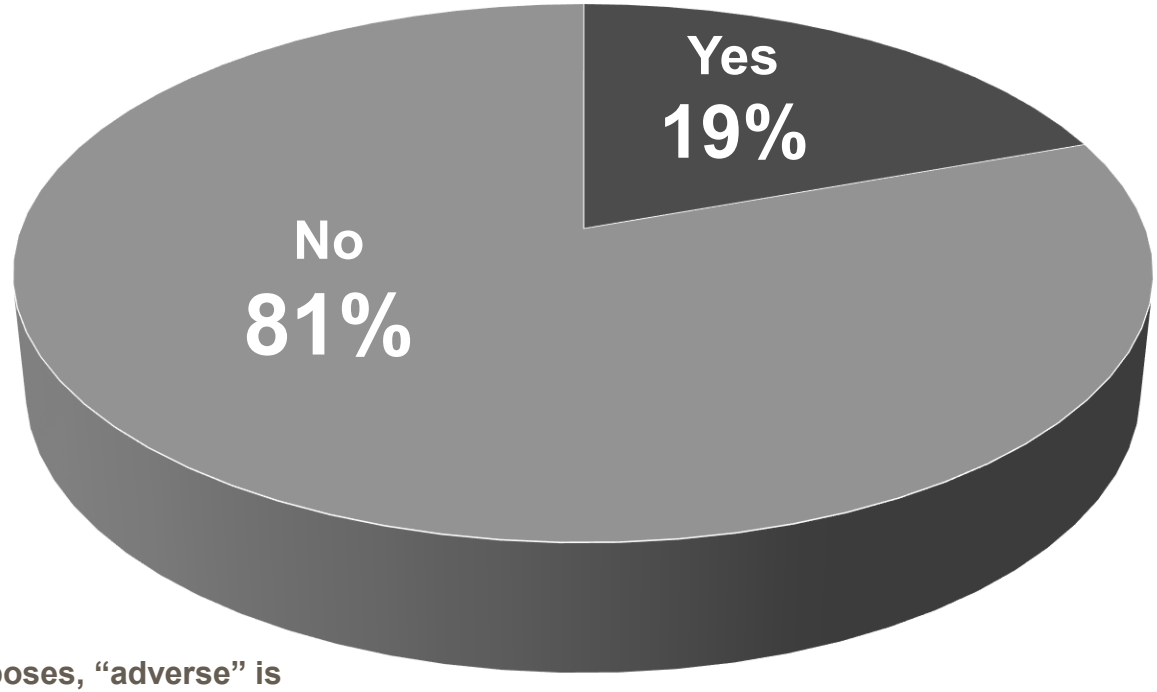
Identity Errors – Staggering Facts

- Of 400K medical error deaths/yr. – approximately 195K due to ***identity errors***
- U.S. Death data study – 251K annual deaths due to medical errors

Source: Bloomberg. *Medical Errors Are Leading Killer After Heart Disease and Cancer, Study Finds.* May 3, 2016.
http://www.healthcareitnews.com/news/deaths-by-medical-mistakes-hit-records

CHIME Survey

Has your hospital incurred an adverse event due to a patient mismatch in the last year?



For this survey's purposes, "adverse" is defined as a negative consequence of care that results in unintended injury or illness.

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Operational Impacts

- ACO's – patient attribution (one record)
- Access – patient portals
- Downstream system impacts
- HIE/HIO adoption
- Payment delays/denials
- Bad debt collections
- Release of information errors
- Identity errors – costly to resolve

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Operational Impacts

Translating into real costs….

- A duplicate record - $20 to $200+.
- Texas Health Partners - $600-$800 to remediate duplicate patient issues
- Sharp HealthCare - 10 FTEs to clean up duplicate records -annual cost ~ $1M

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Operational Impacts

CHIME 2016:

- Intermountain spends $4-5 million annually on technology and processes to ensure proper patient identification

ONC 2014 Report:

- Mayo estimated each misidentification costs $1200.00
- Intermountain estimated $60.00 in operational costs to fix a duplicate record

Rand 2008 Report:

- $8 billion annually - estimated total cost to healthcare system

Operational Impacts

Denied Claims – Big Losses

On average, 35% of denied claims result directly from inaccurate patient identification or inaccurate/incomplete patient information, costing the average healthcare facility $1.2M/year.

Ponemon Institute, Dec 2016

Operational Impacts

What leads to patient misidentification? (Per report…)

- Inability to find patient's medical record (68%)
- Search resulting in multiple or duplicate medical records for patient (67%)
- Patient associated with incorrect record due to same name and/or date of birth (56%)
- Wrong record pulled up in registration due to same name and/or date of birth (61%)

Operational Impacts

Per report…

- **Denied claims due to misidentification issues (~35%)**
- **Est value = $17,422,750**
- **Claims successfully appealed (93%)**
- **Est value of denials unsuccessfully appealed or dropped = $1,219,592**

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Mitigating Issues / Improvement Suggestions

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Action Step – 1

Ensure MPI is CLEAN!

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MPI Clean Up

- Assess "current state"
- Assess matching algorithms
- Clean up pre-conversions
- IT projects ➡ catalyst

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Action Step – 2

Enhance Management Focus: Data Integrity Operations

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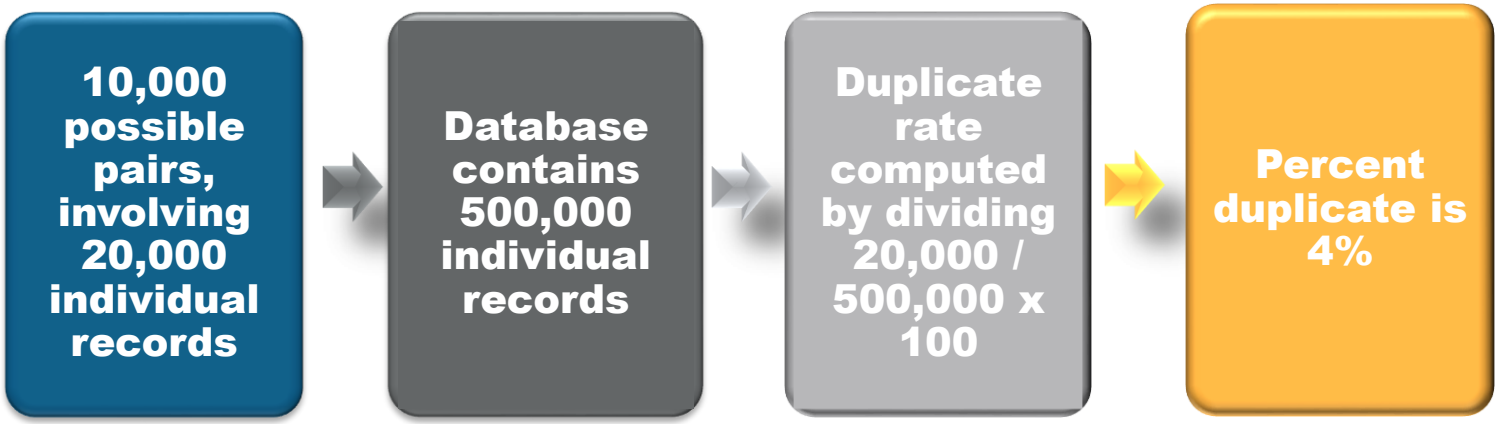
HIM Data Integrity Operations

- Track MPI errors by user/area
- Create duplicate validity procedure
- Ensure task prioritization
- Assess duplicate and creation rates
- Assess overlay creation rate

Duplicate Rate Calculation

$$\frac{\text{Total Number of Potential Duplicate Patient Records}}{\text{Total Number of Patient Records in the MPI Database}} \times 100$$

Example:



Industry Goal: 2% or less

AHIMA Work Group. "Managing the Integrity of Patient Identity in Health Information Exchange (2014 update)" *Journal of AHIMA* 85, no.5 (May 2014): expanded web version

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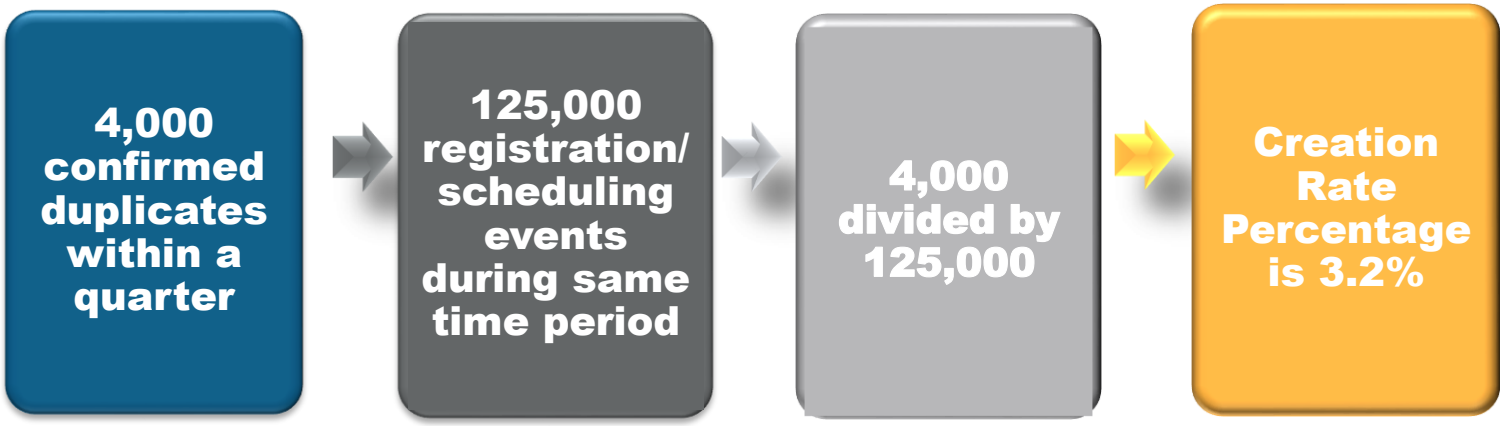
Duplicate Creation Rate Calculation

$$\frac{\text{Total Number of Confirmed Individual Duplicate Patient Records For a Defined Time Period}}{\text{Total Number of Registration, Pre-Registration, or Scheduling Events within the Same Time Period Records in the MPI Database}} \times 100$$

Example:



Industry Goal: .5% or less

AHIMA Work Group. "Managing the Integrity of Patient Identity in Health Information Exchange (2014 update)" *Journal of AHIMA* 85, no.5 (May 2014): expanded web version

Action Step – 3

Evaluate Root Causes of Errors: Check out the Front End

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The Front End

- Assess registration/scheduling procedures
- Promote standardized naming convention procedures
- Define optimal patient searching protocols
- Provide routine error reports

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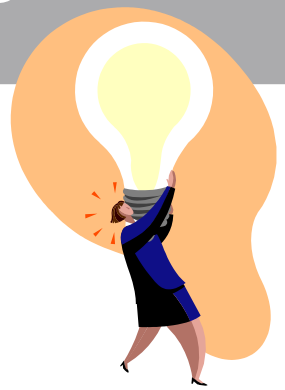
Other Improvement Ideas



- Review equivalent name tables
- Participate in interface testing and conversion mapping efforts
- Serve on RHIO/HIO Committees
- Consider biometrics / photographs
- Third party data sources
- Establish IG framework

Operational Checklist

Healthcare Data Management

- ❑ Establish Governance Teams (*representing Privacy/Security, Compliance, Reporting, HIM/Legal Record, HIM Coding/Chart Completion, Case Mgmt, IT/Interfaces, Quality Improvement*)
  - Roles / Decision-Making Processes for transparency
- ❑ Document Data Flows /Messaging Triggers
- ❑ Survey – Determine what policies exists and refine/revise

MPI Integrity

- ❑ Assess current state (total duplicates, etc.)
- ❑ Calculate Duplicate Creation Rate
- ❑ Assign resources to complete duplicate reconciliation
- ❑ Plan historical MPI clean ups prior to conversions/new systems
- ❑ Assess performance of patient matching algorithm

HIM MPI Data Integrity Operations

- ❑ Establish centralized data integrity team
- ❑ Create multidisciplinary overlay correction plan
- ❑ Assess root causes of MPI errors
- ❑ Monitor MPI errors by user/department and share trends
- ❑ Establish/communicate task priorities

Registration/Scheduling

- ❑ Create/update naming convention policies
- ❑ Define optimal patient searching procedures
- ❑ Provide MPI error reports to management

Monitoring/Reporting Errors

Duplicate Rate	Quarterly
Duplicate Creation Rate	Quarterly
Duplicate Creation Rate by User/Area	Quarterly or Six Month Intervals
Overlay Creation Rate	Six Month Intervals
Overlay Creation Rate by User/Area	Six Month Intervals
EMPI Quality/Safety Issues	Quarterly
Possible Duplicates Reported by staff	Six Month Intervals

Thank You!

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