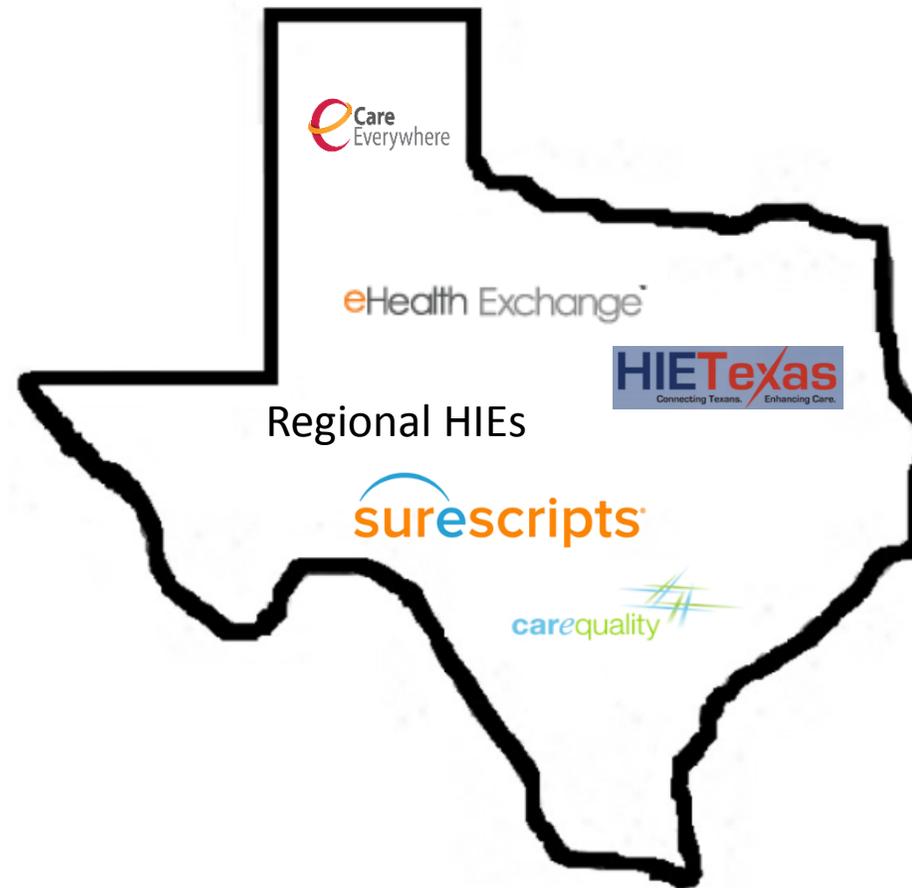


Interoperability – Texas Style



Interoperability – Texas Style

- Why is this important?
- What technologies are out there?
- What impacts exchange?
- What can HIM professionals do?

Goal of Meeting

- Understanding of interoperability platforms currently in use
- Understanding of value of interoperability and exchange
- Introduction to technology tools available to decrease administrative burden
- Understanding of data capture to improve patient linking
- HIM professional advocacy

Why is this important?



Health information exchange associated with improved emergency department care through faster accessing of patient information from outside organizations

Jordan Everson ✉; Keith E Kocher; Julia Adler-Milstein

J Am Med Inform Assoc (2016) ocw116.

DOI: <https://doi.org/10.1093/jamia/ocw116>

Published: 11 August 2016 [Article history](#) ▾

In the Emergency Room –

“for each 1-hour reduction in
access time”:

- Visit time 52.9 minutes shorter
- Likelihood of imaging decreased
- Likelihood of IP admit decreased
- Charges decreased \$1187

Interoperability Platforms...

- HIETexas
- Regional Health Information Exchanges
- Private Health Information Exchanges
- eHealth exchange
- Carequality
- Care Everywhere
- SureScripts Record Locator Service

HIETexas



SECURETexas: Health Information Privacy & Security Certification

THSA has developed a website devoted to SECURETexas, the first state program of its kind in the country offering privacy and security certification for compliance with state and federal laws that govern the use of protected health information. The website, www.SECURETexas.org, provides information on who should get certified, the benefits of certification and how to get started. Visit the SECURETexas website [here](#).



HIETexas: Enabling Secure Exchange of Health Information

HIETexas is a secure network of local and private HIEs that enables health care providers to electronically exchange patients' health information across Texas and the nation. Through HIETexas, local HIEs have the ability to connect to each other, access to a set of state-level shared services that offer operational savings and uniformity, and the ability to connect to the national eHealth Exchange. Learn about HIEs in Texas [here](#).

www.HIETexas.org
February 20, 2017



The Texas Health Services Authority (THSA) is responsible for coordinating the implementation of health information exchange (HIE) in Texas.

The THSA was created by the Texas Legislature in 2007 as a public private partnership, legally structured as a nonprofit corporation, to support the improvement of the Texas health care system by promoting and coordinating HIE and health information technology (HIT) throughout the state to ensure that the right information is available to the right health care providers at the right times.

Vision

We will be recognized as a trusted leader in the development of electronic health information infrastructure that enhances health care quality and efficiency for all patients.

Mission

We will promote and coordinate the development of a seamless electronic health information infrastructure to improve the quality, safety, and efficiency of the Texas health care sector while protecting individual privacy.

eHealth Exchange

Private, public exchange of information using common standards, legal agreement and governance to securely exchange information. Largest exchange in nation.

The eHealth Exchange connects:

All 50 states



26,000 medical groups

Four federal agencies
(DoD, VA, CMS, SSA)



3,400+ dialysis centers

Almost 50% of U.S.
hospitals



8,300 pharmacies



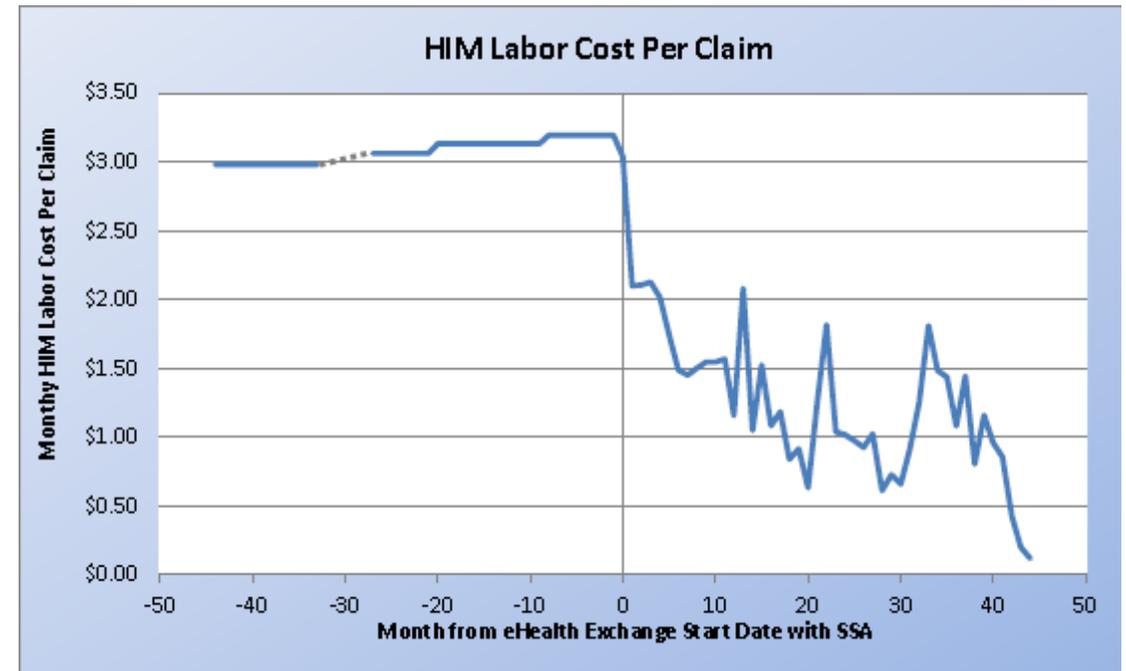
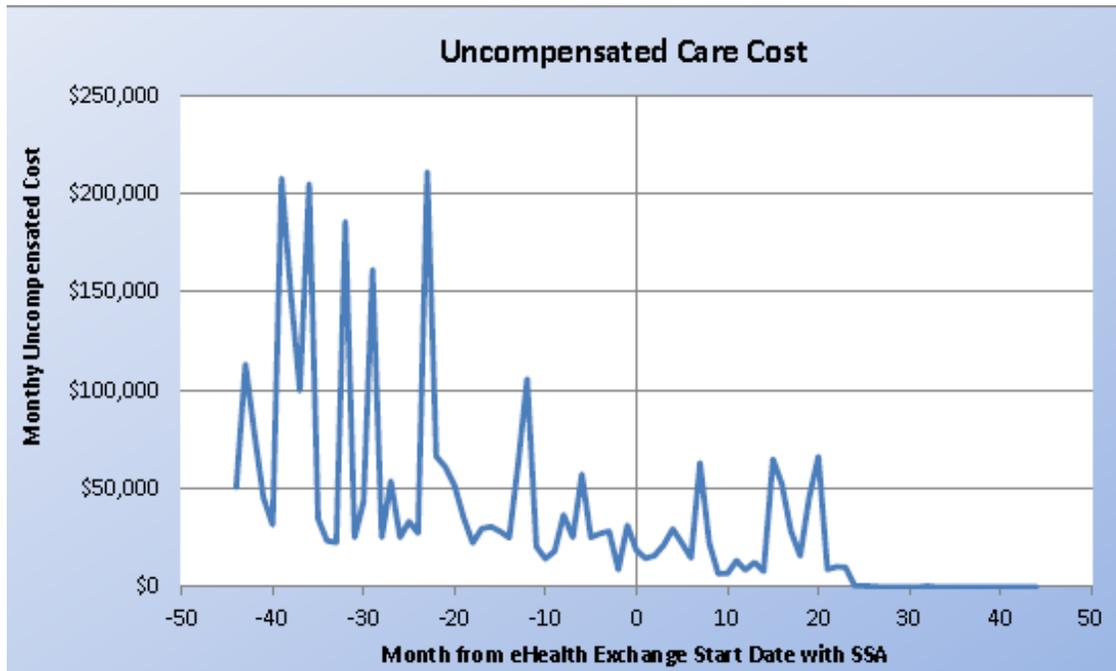
Supporting more than
100 million patients



35 regional and state HIEs in production; 20 onboarding

eHealth: SSA, Disability Determination

- Uncompensated care costs decreased \$575K per year
- Operational costs decreased by \$164K per year
- Children's receives \$60K revenue per year without staff engagement
- What was weeks is now days

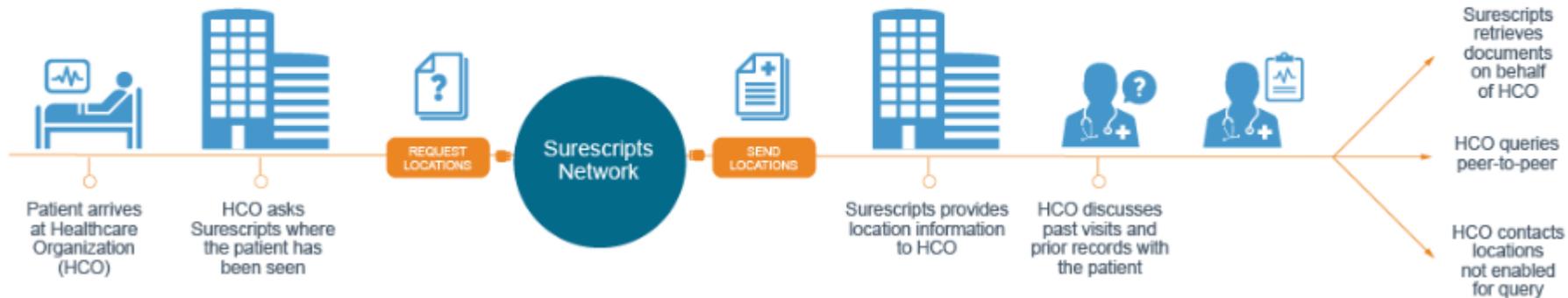




Carequality,
Neutral common
interoperability
framework to
enable exchange

SureScripts National Record Locator Service

Workflow: National Record Locator Service



1. Patient arrives at clinic
2. Record locator service searches for patient records
3. Summary returned with documents auto-retrieved from Carequality participants

- Free through 2019
- www.surescripts.com, Feb 2017

How can we
safely improve
interoperability
across Texas

Standards,
Consistency....

- Automate, leverage technology
- Decrease administrative burdens with no:
 - Authorization for treatment
 - Encounter requirement
- Agreed upon patient naming conventions
- Capture and document aliases
- Capture and use mother's maiden name
- Use telephone numbers
- Use last 4 digits of SS#
- Capture and use multiple birth indicator

What impacts exchange?



Health information exchange policies of 11 diverse health systems and the associated impact on volume of exchange

N Lance Downing; Julia Adler-Milstein; Jonathan P Palma; Steven Lane; Matthew Eisenberg; Christopher Sharp; Northern California HIE Collaborative; Christopher A Longhurst

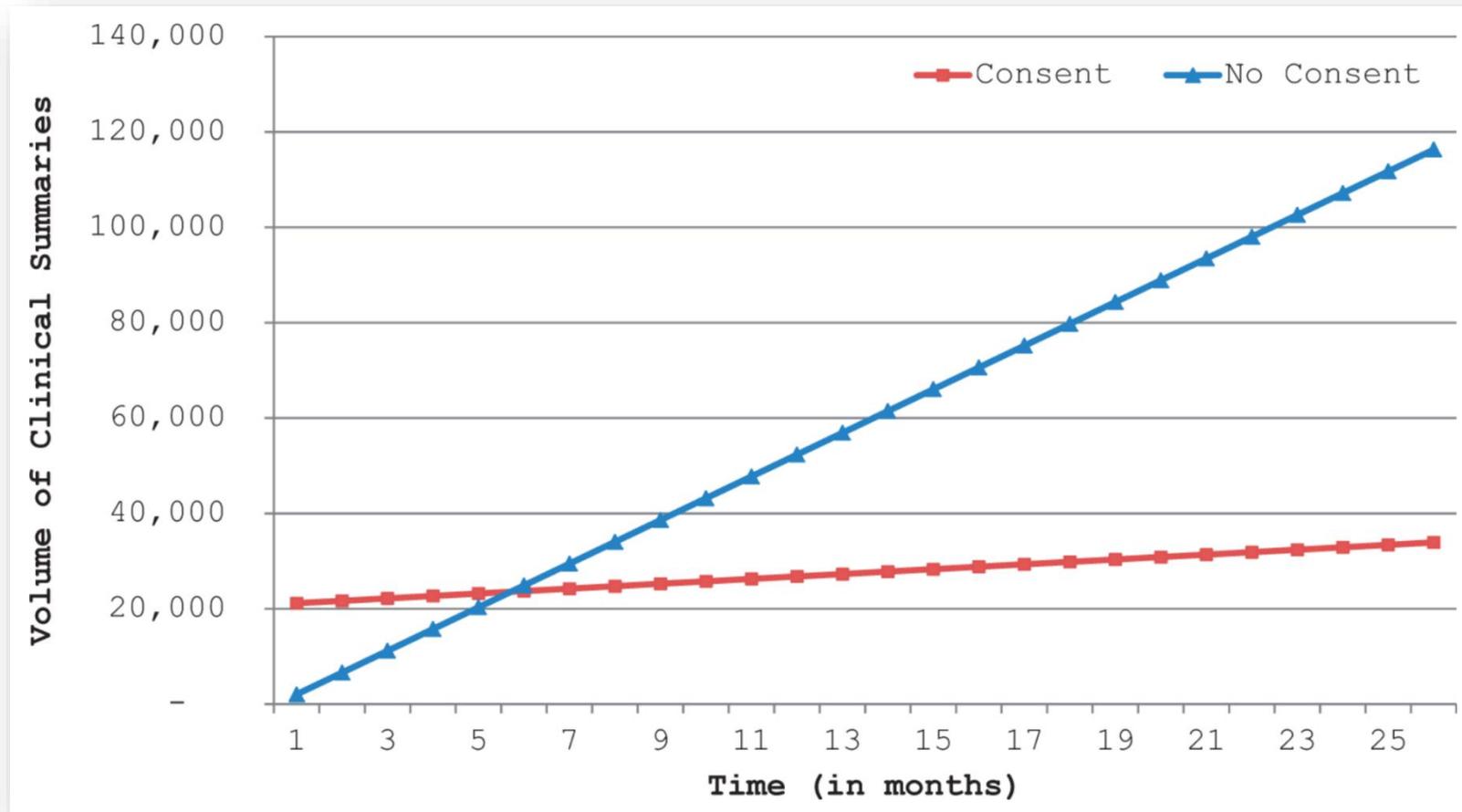
J Am Med Inform Assoc (2016) 24 (1): 113-122.

DOI: <https://doi.org/10.1093/jamia/ocw063>

Published: 14 June 2016 [Article history](#) ▼

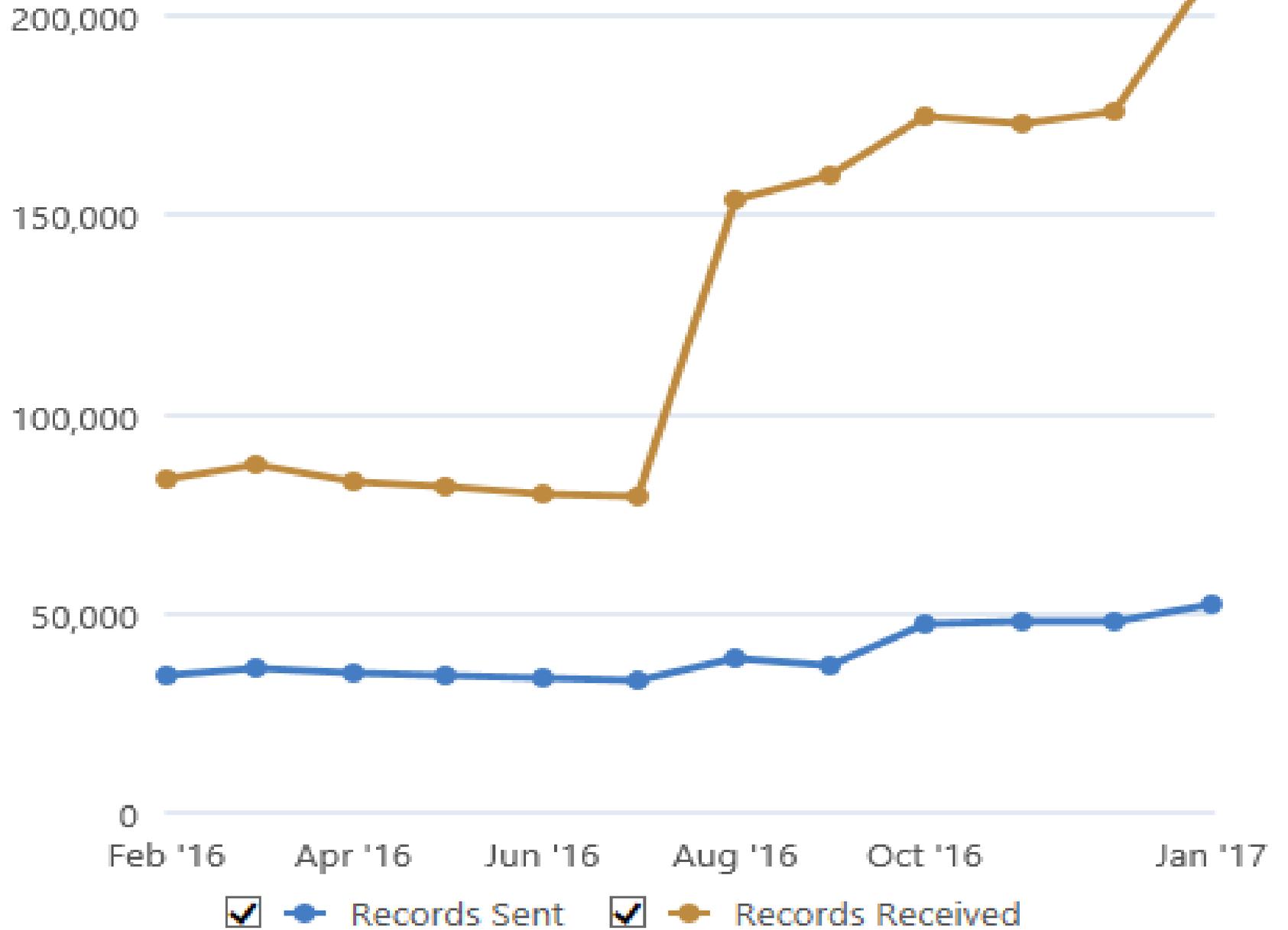
“Automatic querying and limited consent requirements are organizational HIE policy decisions that impact the volume of exchange, and ultimately the information available to providers to support optimal care”.

Eliminating Consent



From: **Health information exchange policies of 11 diverse health systems and the associated impact on volume of exchange**

- Auto-query at Dallas Children's Health System
- Optimizing technology decreasing clerical work



Fundamental, Patient Linking

- Social Security Administration with adult organizations auto-link for disability determination ~85%; pediatrics 75%
- Vendors and organizations do not utilize the same elements except; Name, DOB & gender
- Exchanging records between birthing hospitals and NICUs problematic
- Waiting on national identifier, that won't solve all problems

How can we get closer to 100%? MORE DATA!

Advocacy is needed

NYC Immunization Registry

Title: Health Level 7 Web Service Search Success Rates in New York City's Citywide Immunization Registry

Authors:

- Primary contact: Hannah Mandel, hmandel@health.nyc.gov, New York City Department of Health and Mental Hygiene, Queens NY
- Additional authors: Saqeb Alam, salam4@health.nyc.gov, New York City Department of Health and Mental Hygiene, Queens NY
- Angel Aponte, aaponte@health.nyc.gov, New York City Department of Health and Mental Hygiene, Queens NY

Abstract Summary:

Compare match rates for searches using different data elements in the Citywide Immunization Registry's real-time Health Level 7 (HL7) Web Service.

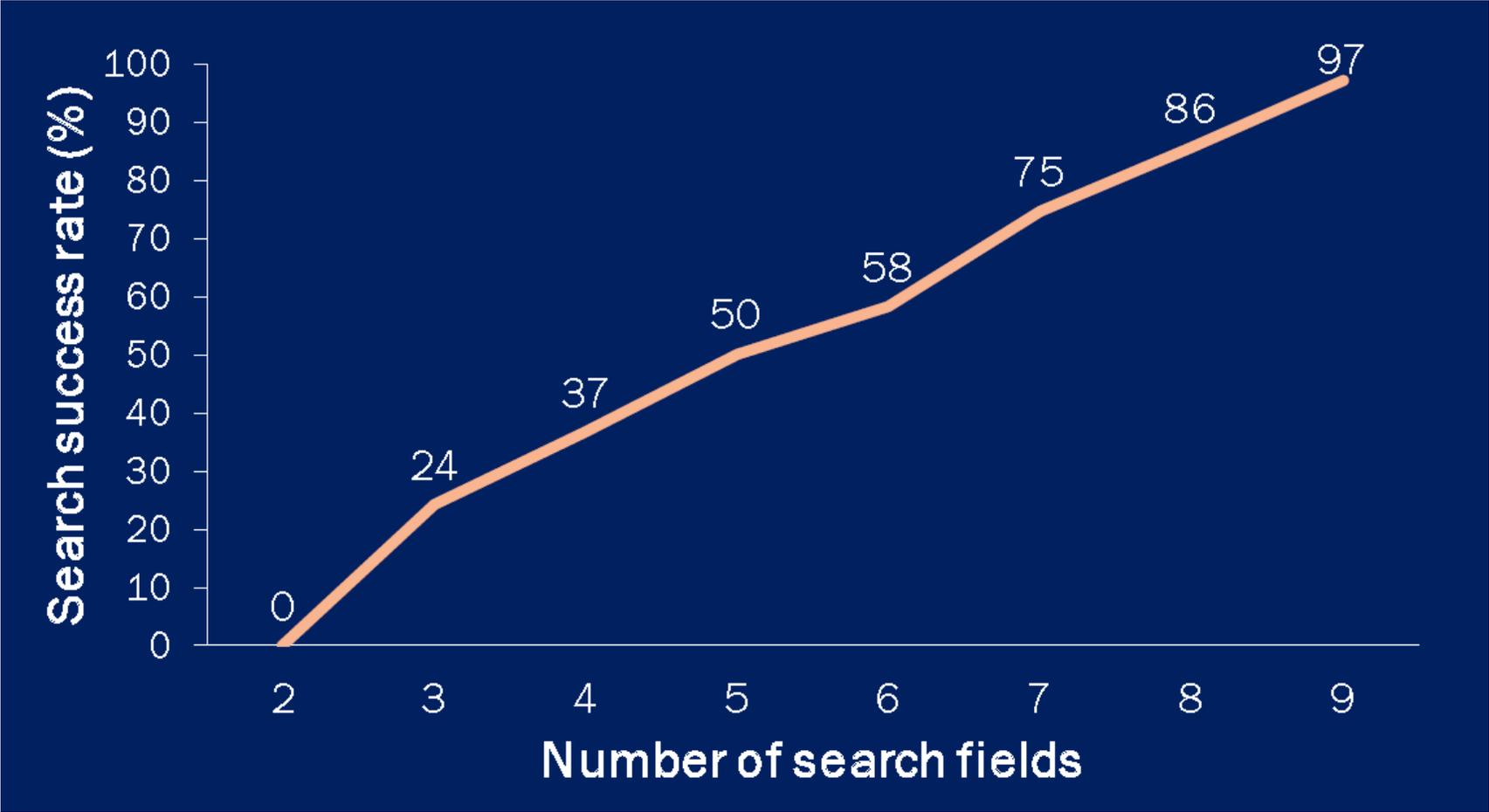
Background: The Citywide Immunization Registry (CIR) currently receives data and has supported queries from provider sites through a real-time HL7 Web Service since July 2009. As of November 2014, 564 sites have integrated their EHRs with the CIR's Web Service to submit immunization reports electronically; 223 of these sites can perform bidirectional data exchange and query the CIR. We describe the CIR search process and match rate for patients queried over one year, exploring the factors that lead to successful queries.

Methods: Queries of the CIR are performed using combinations of 14 search terms to determine a unique match. We calculated the search success rate for HL7 2.3.1 queries performed between August 1, 2013 and July 31, 2014 by EHR vendor, patient age group, and different search term combinations.

Results: 1,938,867 searches were performed within the period of analysis, of which 81% were for children <19 years. The match rate for children (86.2%) was higher than for adults >19 years (45.6%). Searches for children had a success rate of 98.2% with a CIR unique identifier (ID) and 71.8% without; when searches lacked CIR ID and **contained mother's maiden name, the search success rate improved to 91.1%. For adult searches without CIR ID, mother's maiden name increased the success rate from 34.2% to 67.6%.** Search success rate varied by EHR vendor, ranging from 58.6% to 94.0% for children and 30.6% to 82.4% for adults.

Conclusions: The CIR can be successfully queried by providers, but search success varies by the data elements used as well as patient age and EHR vendor. This analysis reveals how EHRs and CIR can improve search success by identifying fields important to patient matching, and can inform EHR standards and other immunization information systems in the process of implementing bidirectional data exchange.

Data Availability Makes a Difference

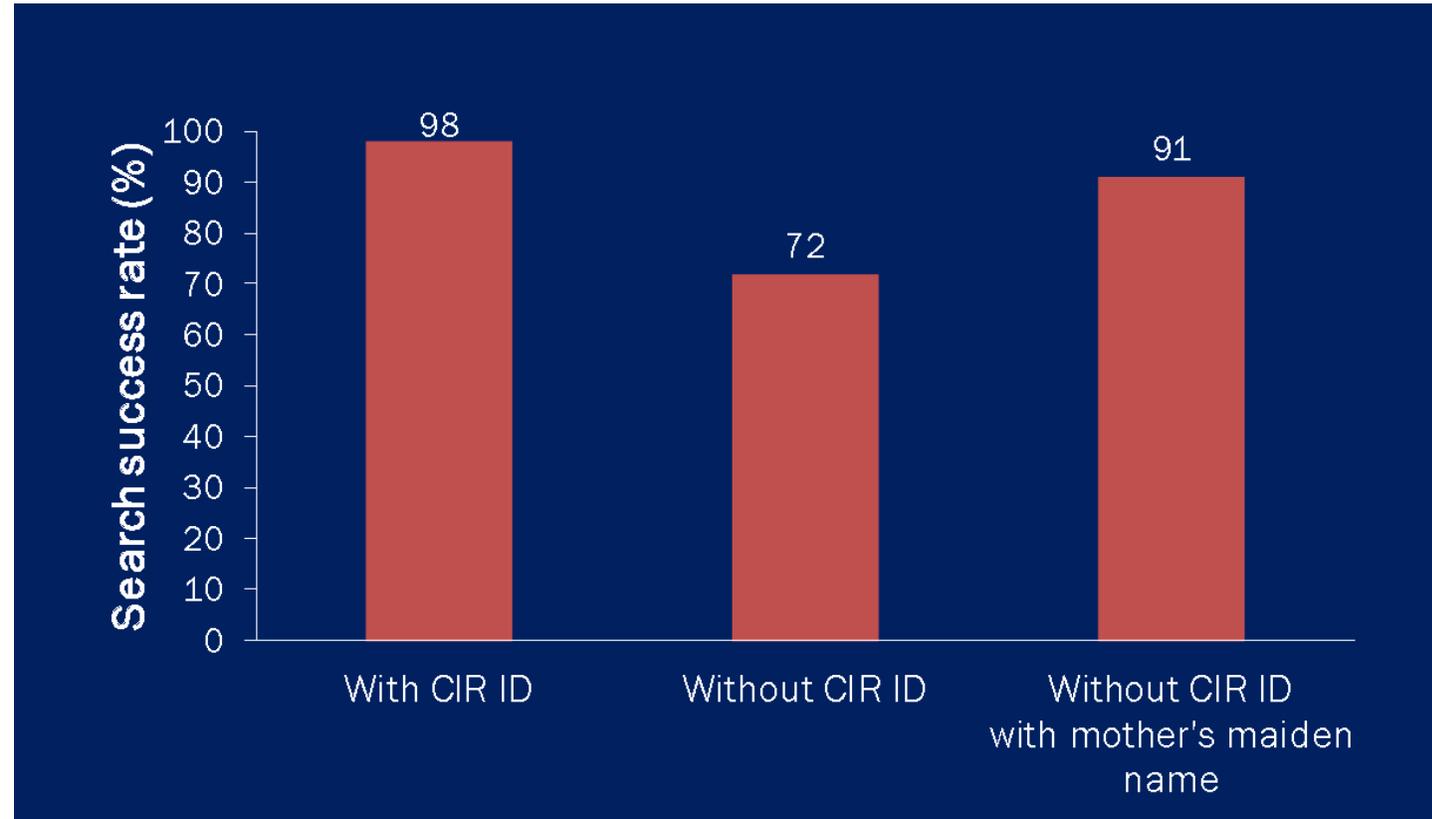


- No City Wide Immunization Registry ID or Medical Record Number
- Data Search:
 - Name
 - DOB
 - Gender
 - Medicaid #
 - Mother's Name
 - Mother's DOB
 - Father' Name
 - Phone Numbers

American Immunization Registry Association, February 20, 2017

<http://www.immregistries.org/resources/iis-meetings/2015-national-meeting-breakout-session-4>

Mother's Maiden Name Impact



American Immunization Registry Association, February 20, 2017

<http://www.immregistries.org/resources/iis-meetings/2015-national-meeting-breakout-session-4>

Issues with Newborn Naming

Use of Temporary Naming Conventions, July 2015,
American Academy of Pediatrics, Jason Adelman,
Judy Aschner, Clyde Schechter, Robert Angert,
Jeffrey Weiss, Amisha Rai, Mathew Berger, Stan
Reissman, Vibin Parakkattu, Bejoy Chacko,
Andrew Racine and William Southern

“...nondistinct naming conventions are associated with an increased risk of wrong-patient errors and this risk can be mitigated by changing to a more distinct naming convention.”

Issues with Multiple Birth Patient Linking

- ~2.5 Million multiple birth persons are under 18
 - ~89K Triplet + birth persons
 - Same address, telephone number and date of birth
- Children's Story
 - Three nationally respected, separate master patient index databases were found during testing prior to go-live to overlay multiple birth patients

Solution offered by:

HEALTH INFORMATION
MANAGEMENT FORUM



- Adoption of a national standardized naming convention for temporary newborn names with the following naming standard:
 - Mom's name: **Katie Smith**
 - Mom's maiden name: **Katie Miller**
 - Baby's name if she had a girl: **Smith, Girl Katie**
 - Baby's name if she had a boy: **Smith, Boy Katie**
 - Baby's name if she had an undetermined sex: **Smith, Baby Katie**
 - If the mom has twins: **Smith, Girl A Katie** and **Smith, Boy B Katie**
- Adoption of a national standard requiring maintaining temporary newborn name as an “alias” for use in matching.
- Capture and utilize mother's maiden name,
- Capture and utilize multiple birth designation and multiple birth order

Dorothy O'Hagan, Katherine Lusk and Hannah Stevens, © Children's Hospital Association, www.childrenshospitals.org

Published: December 19, 2016

Patient Naming Data Standards

Accurate patient identification is foundational to successful linking of patient records.

Standardized naming conventions improve data integrity and allow optimization of technology to link patient records across EMRs

Rules and Conventions:

- The patient's name will be entered in all capitals.
- The complete legal name as reflected on government issued identification such as but not limited to birth certificate, passport, driver's license or as altered by a legal name change event. Events altering the legal name include: marriage, divorce, adoption or a court approved name change.
- If the patient does not have a middle name, this field is left blank in the registration process.
- If the patient's middle name is an initial only, this should be entered.

Name at Registration	First Name	Middle Name	Last Name
Harvey William Blake	HARVEY	WILLIAM	BLAKE
K.D. Lang	K	D	LANG
R.D. Wayne Miller	RD	WAYNE	MILLER
George 7 Jones	GEORGE	7	JONES
Elena Lusk	ELENA		LUSK
Gus Mask	GUS	M.	MASK

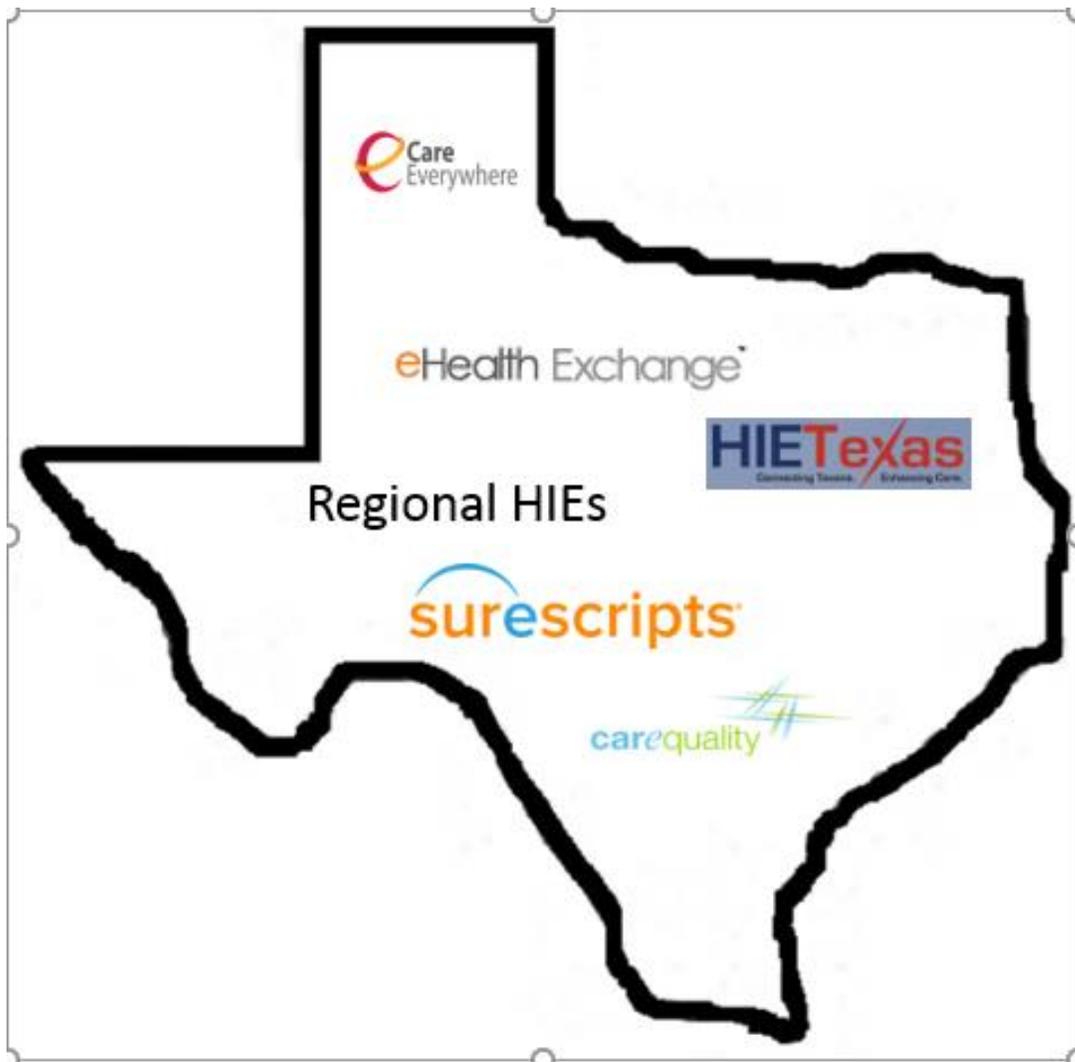
- Suffixes should be entered if suffix appears on the legal form of identification. Examples of suffixes include but not limited to Junior, Jr., II, III, Sr. and IV.

Name at Registration	First Name	Middle Name	Last Name	Suffix
James R. Billings, Jr.	JAMES	RANDOLPH	BILLINGS	JUNIOR
Charles Wayne Miller, III	CHARLES	WAYNE	MILLER	III

- Nicknames or diminutive forms of the name should only be entered as alternative names or alias. They should never be entered as the legal name. When the patient's legal name is a commonly used nickname, the legal name will be entered as given.

Recommended Data Capture

- Legal Name (Last, First and Middle)
- Alias Names or Previous Names
- Age
- Date of Birth
- Gender
- Address (US Postal Service)
- Historic Addresses
- Telephone Number(s)
- Social Security Number
- Mother's Maiden Name
- Multiple Birth Indicator



Can you champion?

- Implement Carequality, eHealth Exchange, Regional HIEs and SureScripts National Record Locator Service
- Eliminate authorization requirement for treatment purposes
- Eliminate encounter requirement
- Automate query process
- Adopt Children's Health Association Patient Naming Conventions
- Adopt increased data capture for linking

Questions

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Katherine.Lusk@childrens.com