Incorporating Diverse Data Sets and User Experiences from a Variety of Perspectives

Community Information Exchange SUMMIT

- Dr. Oleg Bess, 4Medica
- Carrie Hoff , San Diego Health and Human Services Agency
- Susan Millea, Children's Optimal Health
- Susan Wilson, Informatica

Incorporating Diverse Data Sets and User Experiences from a Variety of Perspectives

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Patient-Centric Inter-operability Within Healthcare & Community Ecosystem

=

Delivering Value to Patients!!!

Moderator:

Oleg Bess, MD
4Medica

Panelists:

Carrie Hoff
San Diego Health and Human Services

Susan Millea, PhD
Children's Optimal Health

Susan Wilson
Informatica

About 4medica

Founded in 1998

60 Million Patient Identities

16,000 Medical Practices

35,000 Unique Physicians

Process Millions of Clinical Transactions Per Month

Over 100+ Hospitals, Labs, Imaging Center, HIEs/HINs, ACOs

Multiple Strategic Partners:

LIS/RIS/HIS/EMR/PMS Vendors

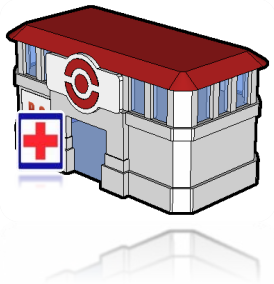
Billing, CRM & Analytics, Other Health IT Companies

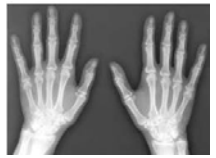
Industry Associations

Oleg Bess, MD
Co-Founder & CEO
obess@4medica.com

4medica®
One Patient...One Record

Oleg Bess, MD
obess@4medica.com





Health Department

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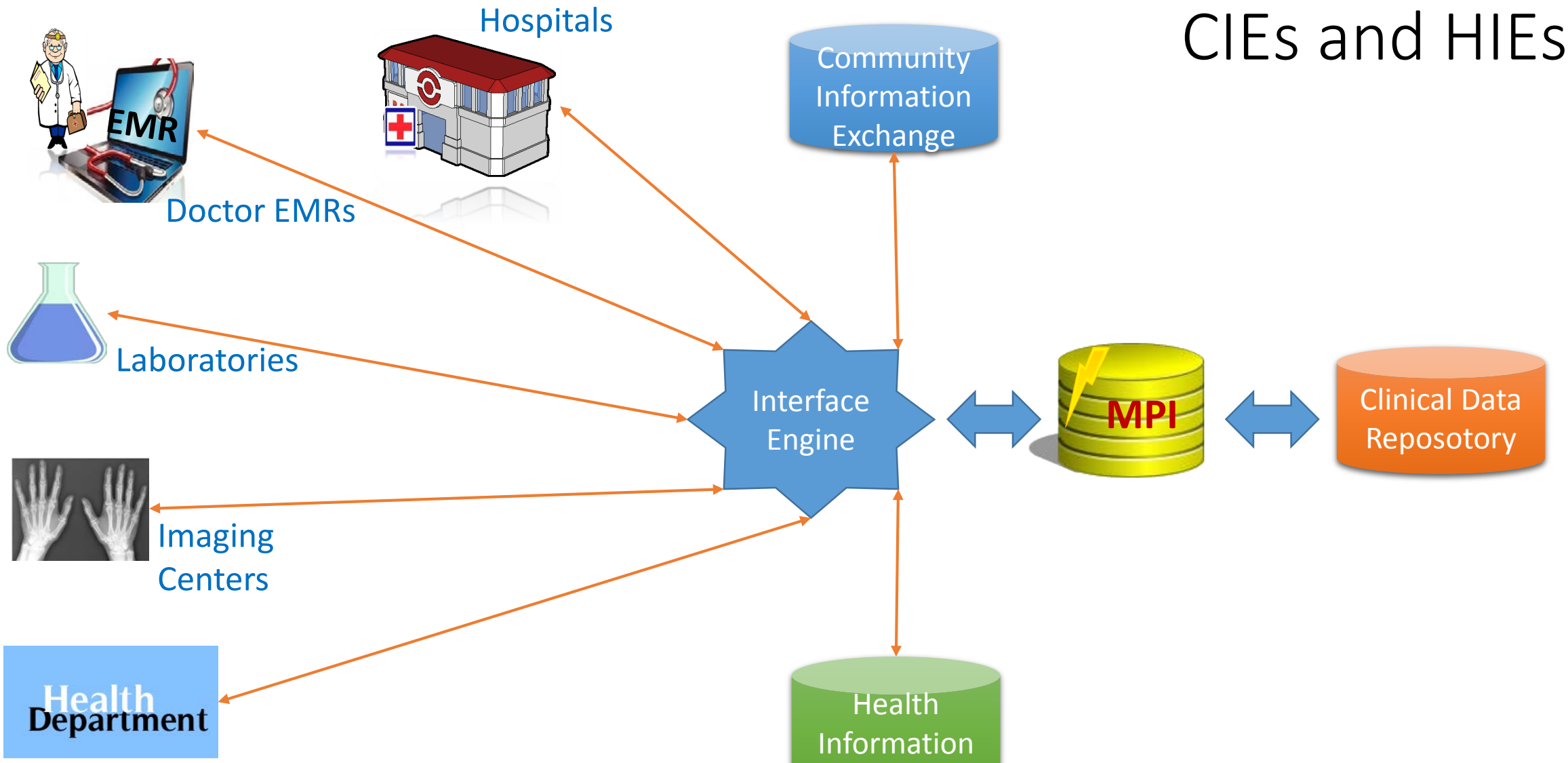
Connectivity for CIEs and HIEs



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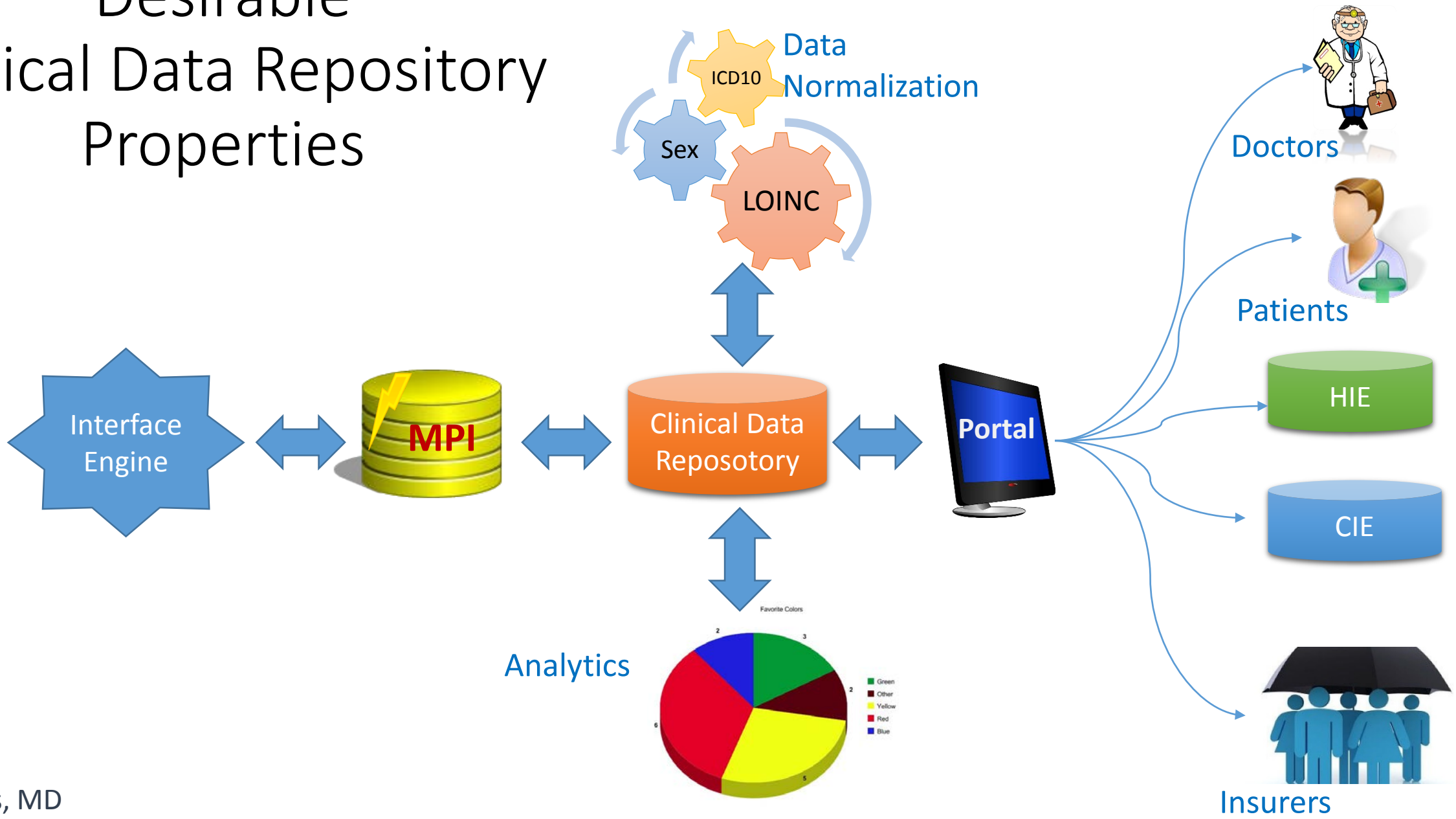
Desirable Clinical Data Repository Properties



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Desirable MPI Properties

- Match Historic Demographics
  - Phones, Names, Addresses always change
  - Many documents contain OLD information
- Real-Time
  - Most Alerts & Many Population Health Use-cases require Real-Time person Identification
- Cloud-based / SaaS preferred
  - Priced monthly, based on your size. No initial cap costs
  - Ease of implementation must be considered
  - No hardware management
  - Implement in weeks

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children's optimal health

Incorporating Diverse Data Sets and User Experiences: *the Child's Story and the Parent's Perspective*

Susan Millea, Ph.D.

Children's Optimal Health

Community Information Exchange Summit

San Diego, California

April 16-17, 2018

www.cohtx.org smillea@cohtx.org

NNIP NATIONAL NEIGHBORHOOD INDICATORS PARTNERSHIP

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A History of Community Information Exchange

- **Trusted independent 3rd Party, Non-Profit, intentionally small**
  - Mulit-Sector Collective Leadership Initiative begin in 2008
  - Strategic Board Composition
  - Focusing on Austin and central Texas neighborhoods; ages 0-25
- **GIS Mapping as a Shared Community Resource**
  - Visualize Disparities, Target Change, Monitor Outcomes at the neighborhood level
  - NNIP partner
- **Encourage Data sharing for Community Benefit**
  - Develop and maintain cross-sector data partnerships, negotiate legal agreements
  - Public, administrative data
  - Person level, de-identified, health, education, social service
  - HIPAA, FERPA, regulatory compliance
- **Undergoing Change as the Community and Technology Change**

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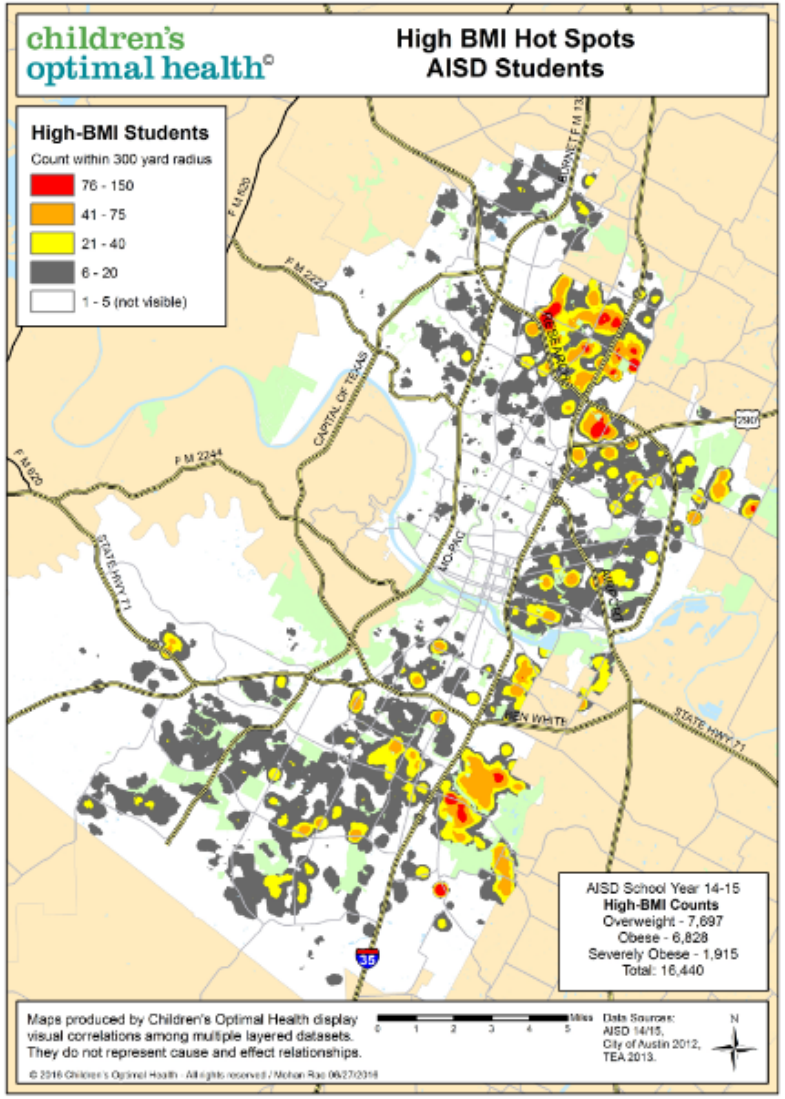
Strategic Board Membership Drives the Work

Local Leadership

- **Health**
  - Competing Health Systems, Health Payers
- **Governmental Entities**
  - City, County, Health District
- **Austin Independent School District**
- **University**
  - University of Texas at Austin
  - Dell Medical School
- **Social Service Providers**
- **Business Sector**
- **Philanthropic Sector**



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Big Picture Goal:
A Community Data Ecosystem for Children

Attendance, Behavior, Academic Outcomes

Data Backbone,
Technical Data Governance
Population Health

Children's Comprehensive Care Clinic
Accredited Center of Excellence
Dr. Rahel Berhane
Better Health Outcomes, Parent Satisfaction, Reduced Cost

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Community Data Governance
Population Health

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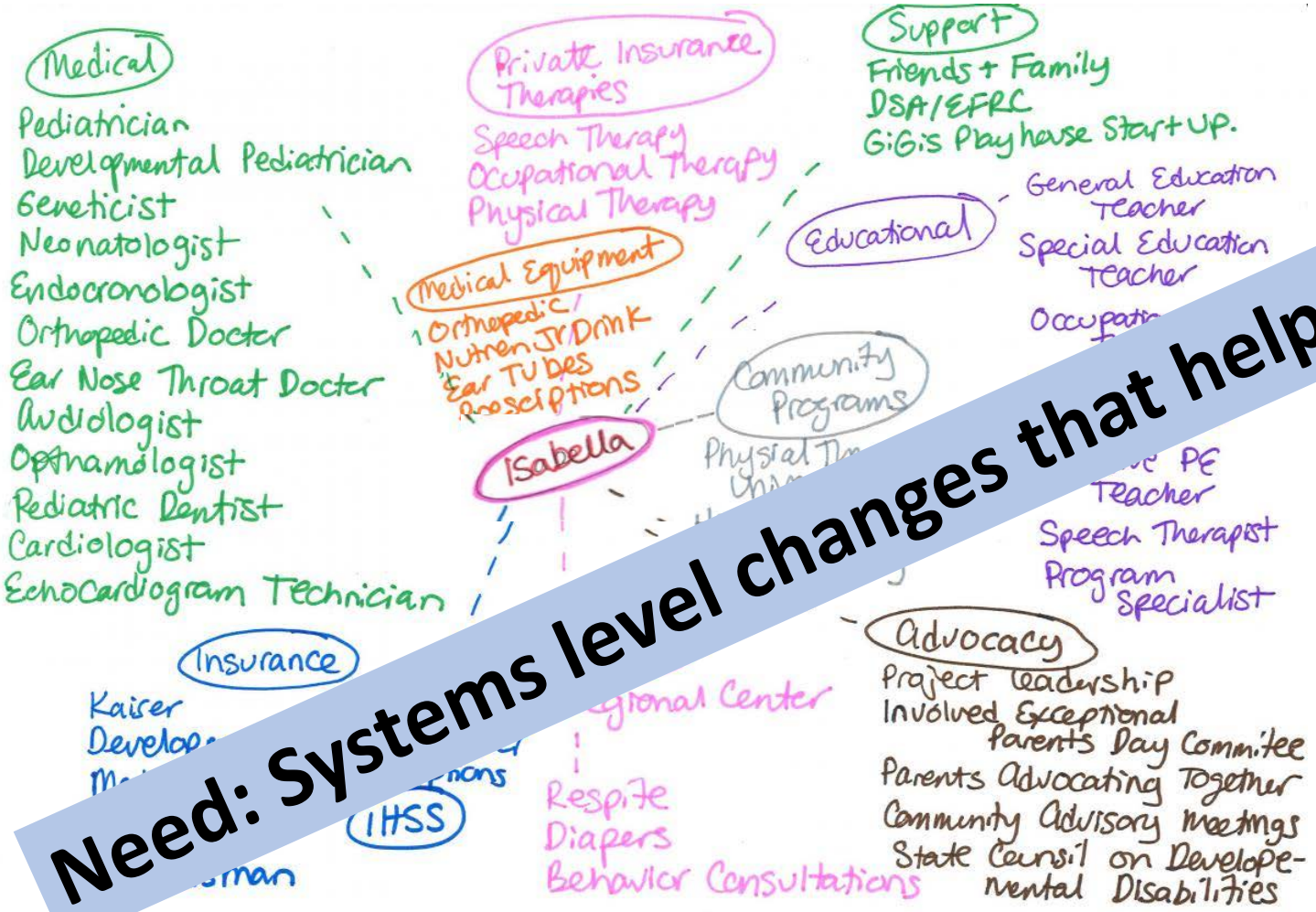
The Parent (Patient) Perspective: The St

Hit All Systems

Use Case: Children with Medical Complexity

Need: Systems level changes that help people, not just providers



P entifies

11 Systems

(not just hospitals and clinics)

44 Providers/Programs

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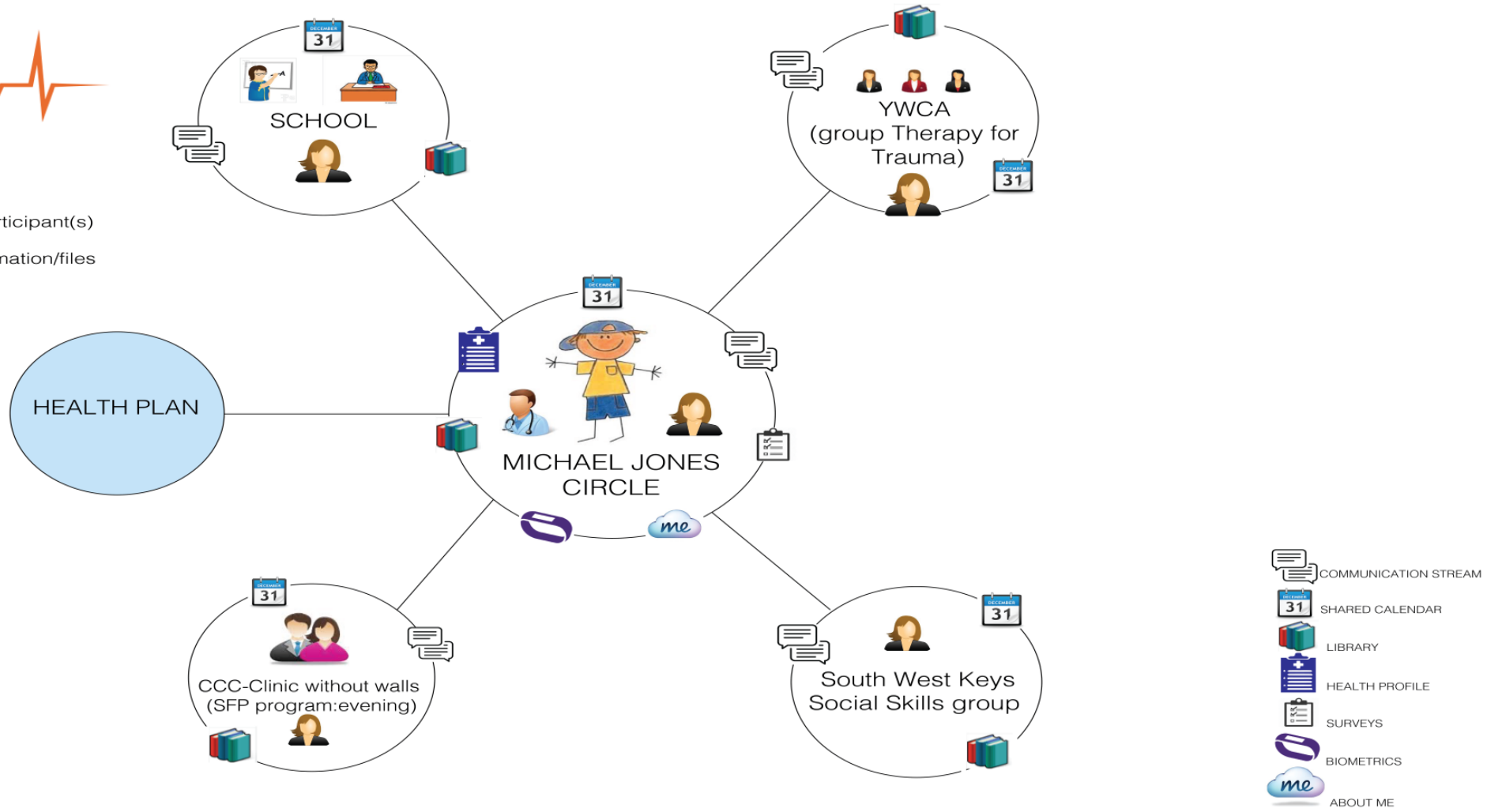
Integrated View of Patient Encounters/Outcomes

PATIENET

Advantages:
A Patient Network
Include patient (family) as responsible participant(s)
Threaded, real-time Activity Stream
Library Storage/Access of important information/files
"About Me" Slideshow
Include multiple languages
Allow access to others



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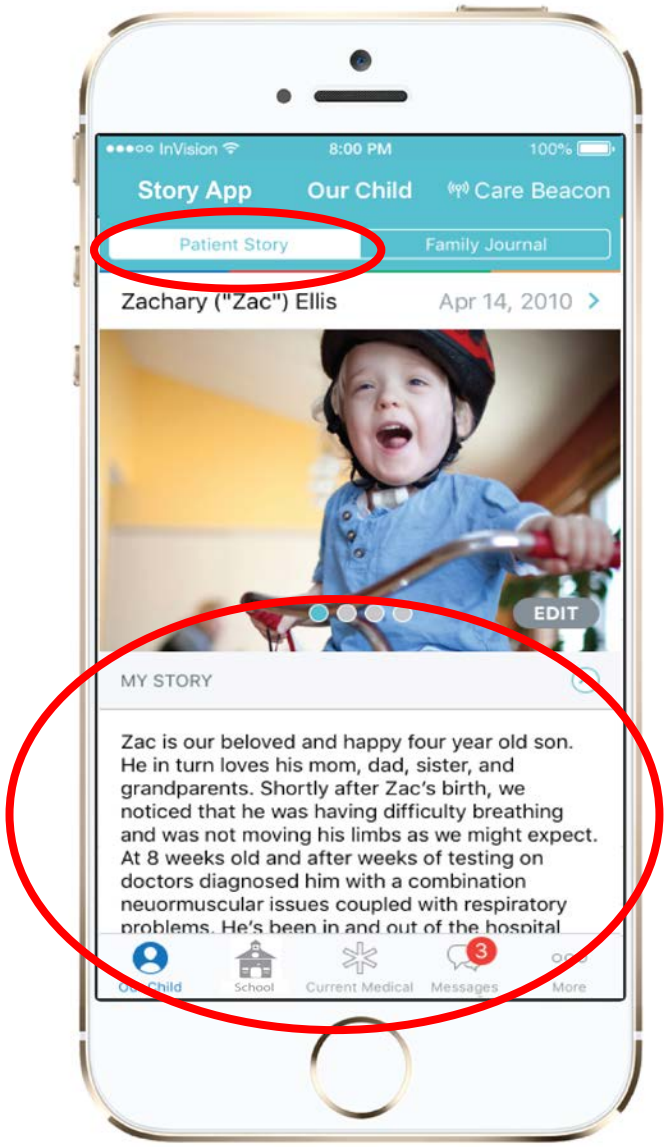
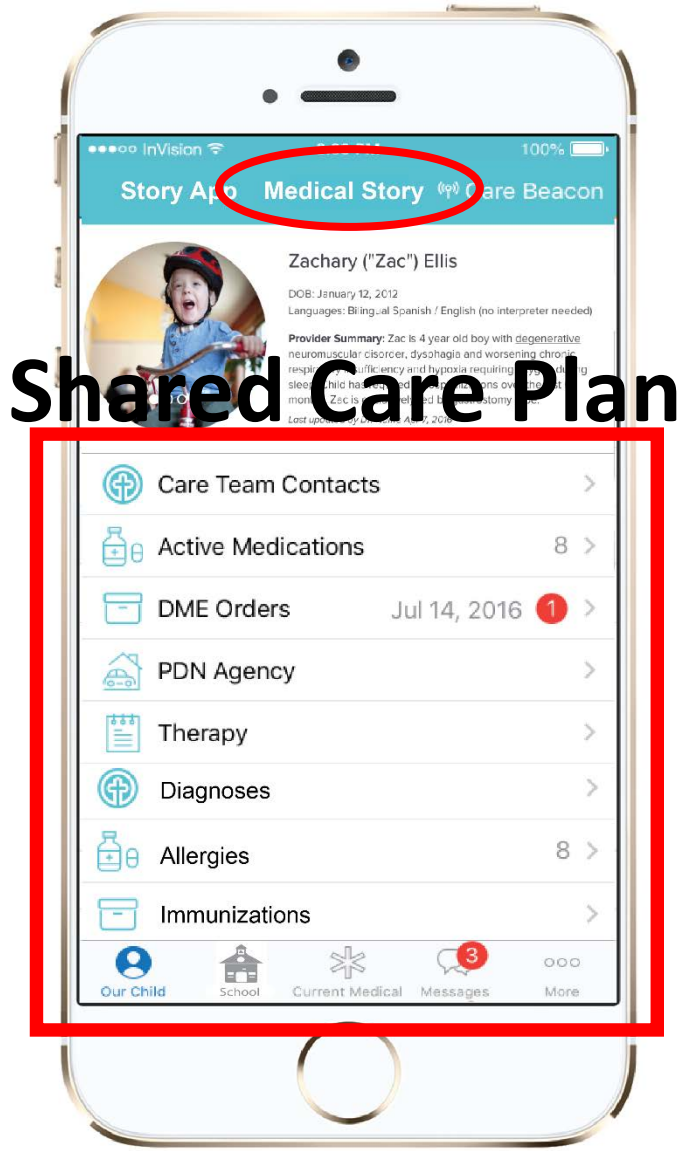
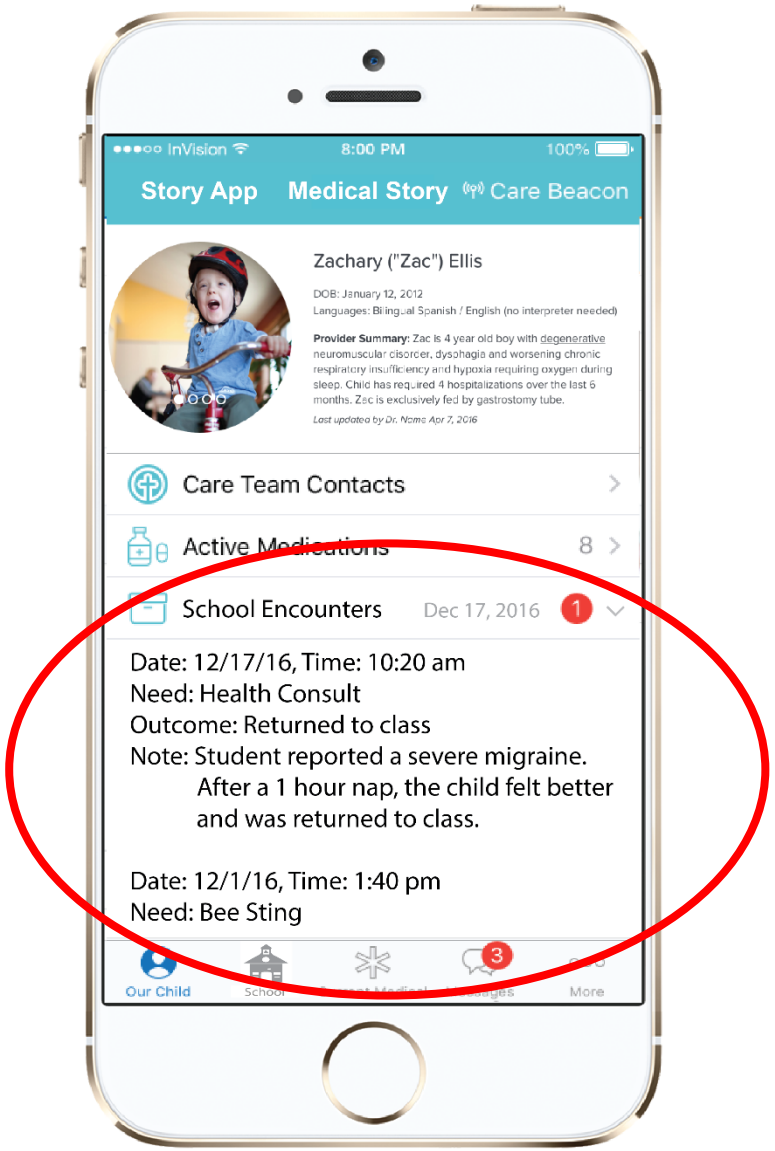
Story App (working prototype), . . . desktop version is completing development







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Shared Care Plan: Current Status Integrating Data from Multiple Sources

- Demographics: EMRs (Athena*, NextGen)
- Admissions/ADT: Hospital: Cerner/CommonWell
- Patient encounter data (multiple sources):
  - Clincal Encounters*, Private Duty Nurses*, School Nurses*, OT/PT/Speech
- Lab Results: Athena* (multiple sources)
- Medications: Athena* (multiple sources)
- Payer Data (Insurance) Blue Cross Blue Shield MCO*, others
- Durable Medical Equipment: Multiple Suppliers*

*Currently Active

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System Specifications

Best of Breed Approach for Selection of Components

- Application Architecture Principles
  - Security/Privacy, Reliability, Extensibility, Scalability, Accessibility

- Across-platforms, agnostic design ensures connectivity and display
- APIs, PKI encryption, PKI management internal to application
- HIPAA/HiTECH compliant, data encryption at all levels of storage
  - RSA 3096 bit keys, AES-256 encryption
- Email APIs for secure communication between persons/entities
  - Labs, pharmacies, varied providers independent of local IT system
- Modular, object-oriented multi-layer design
- Node based model allows replication for scalability
- HL-7, FHIR 3.0 (send/receive API, SOAP, REST), sFTP

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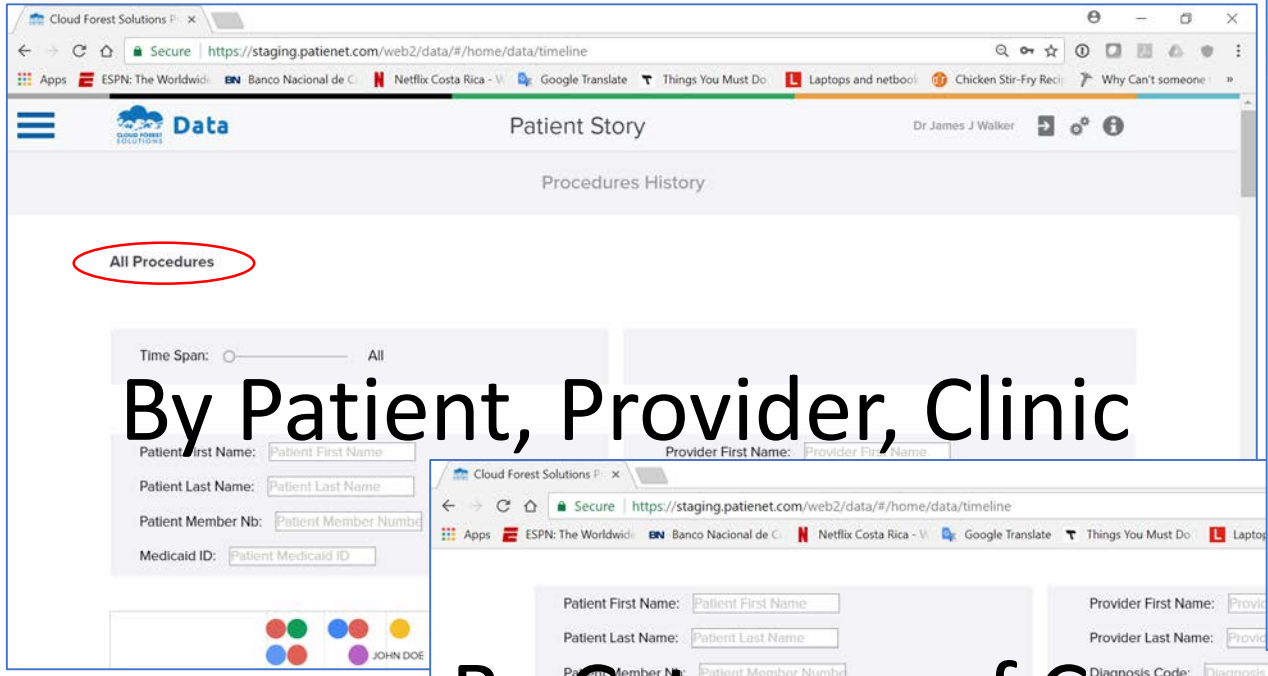
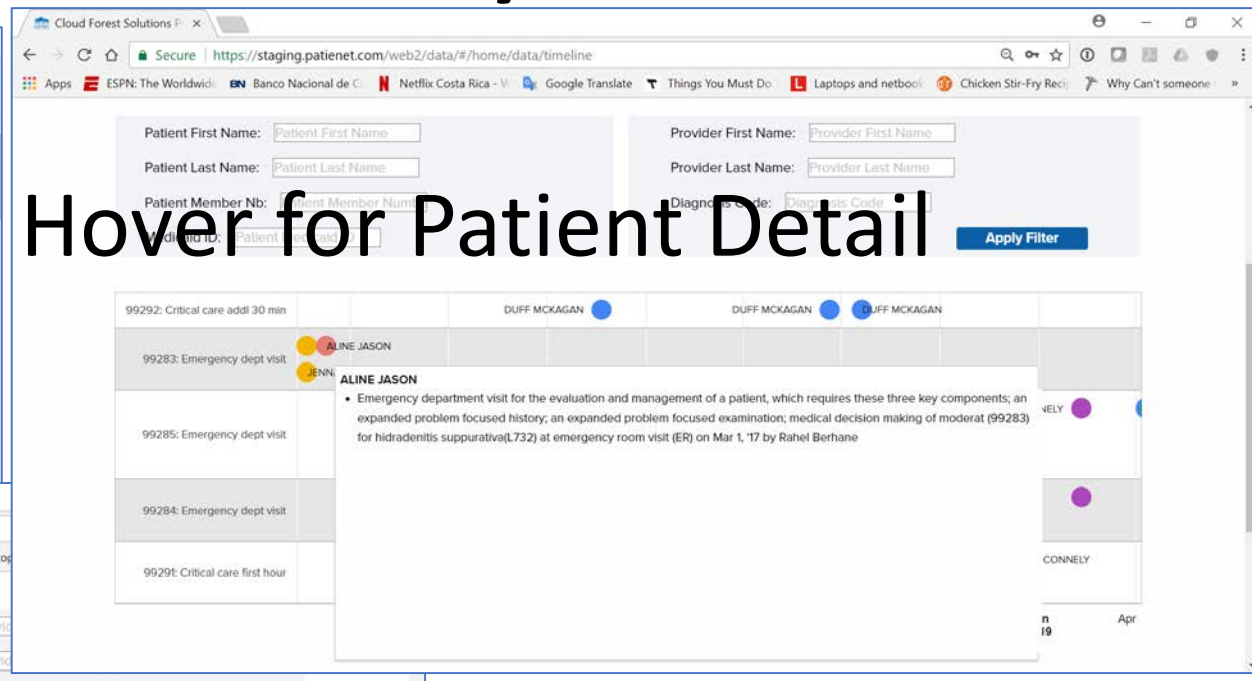
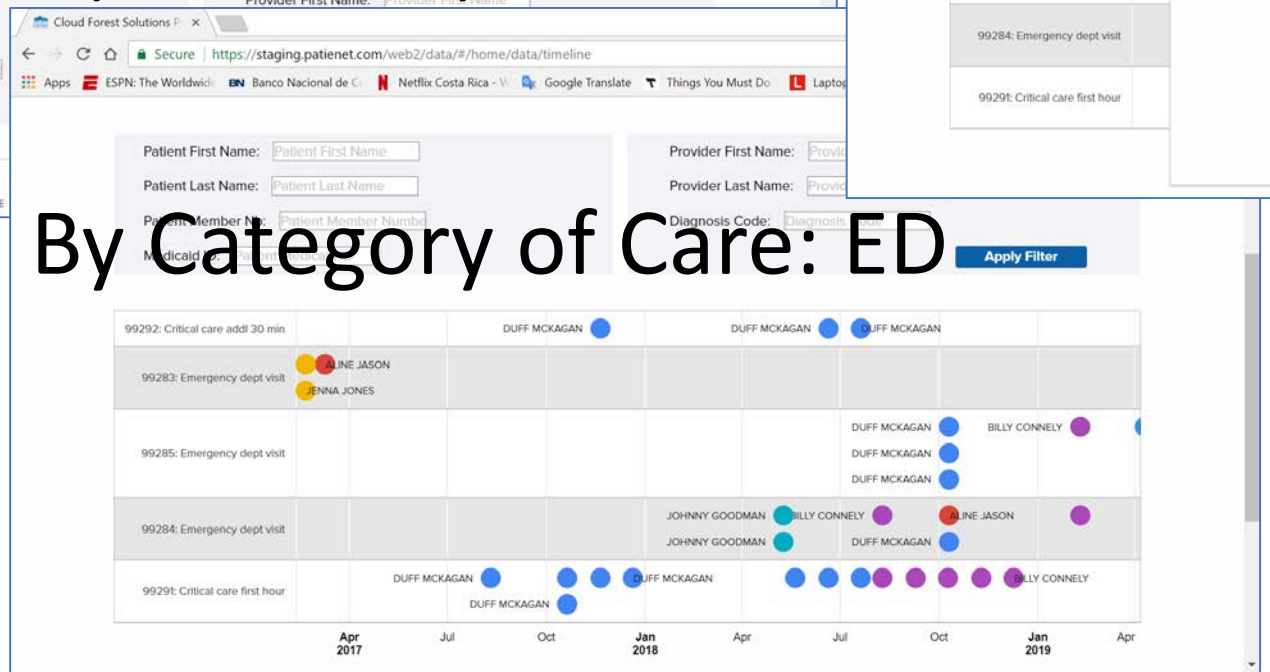
Integrated Utilization Review Report (Payer-based Data)



By Patient, Provider, Clinic



Hover for Patient Detail



By Category of Care: ED

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Next Steps

- **Parent Consent Module (granular consent and control)**
  - Most discussion of data integration focuses on institutional linkages
  - Prototype: ***Parent Controlled*** Circles of Care
    - Role-based access to data
      - Medical Team
      - Social Support Services Team
      - Parent Supports Circle ("Social Media")
- **Participation Tracking, Feedback Survey**
  - Appointments scheduled and attended
  - Barriers to participation

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Thank You!

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April.2018

Unleash the Transformational Power of Your Patient Data

Patient Master Solution Overview

Susan Wilson, Data Governance Domain Leader

Informatica™

Common Business Challenges

Finding the right data is like looking for a needle in a haystack.

- **Names are duplicated, and addresses are wrong.** Staff and patients can't find the right …
  - Patient records in EHRs, digital marketing tools, etc.,
  - Provider records in directories, fee schedules, etc.,
  - Items in EHRs, supply chain systems, etc.
- **Staff reenter data multiple times.** It's an administrative nightmare to …
  - Understand patient clinical history, behaviors, preferences, and needs,
  - Recruit, credential and monitor providers,
  - Mange vendor contracts and monitor compliance.
- **Staff & executives struggle to understand relationships that …**
  - Predict marketing outcomes – can't match consumers to patients, households, influencers, anonymous devices
  - Model financial outcomes – can't match providers to networks, contracts, encounters and outcomes,
  - Prioritize supply chain initiatives – can't match manufacturers to distributors, inventory and outcomes.

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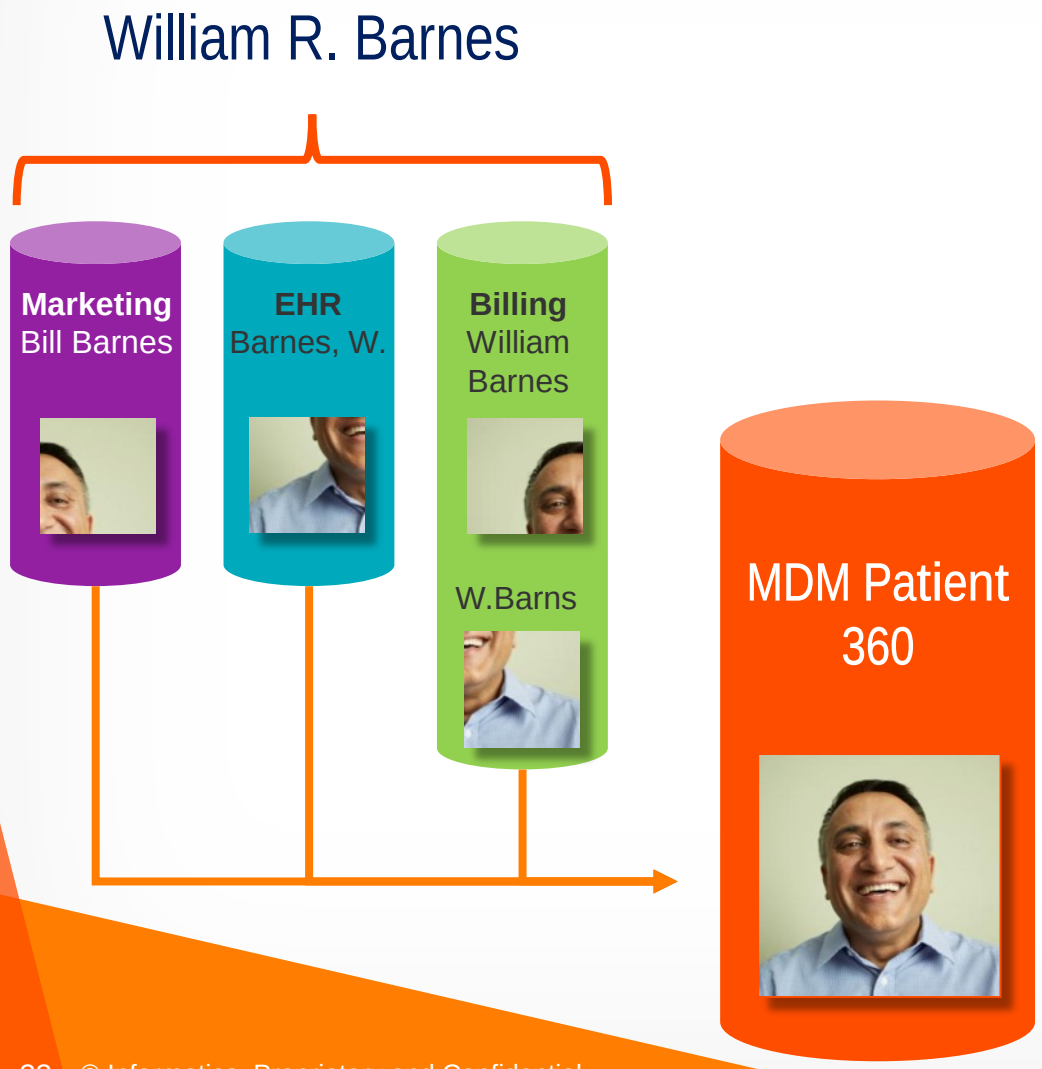
How do you treat the Patients



… If you don't know:

- W. Barnes & Bill Barnes are the same person,
- He's been diagnosed with COPD,
- He's been prescribed a corticosteroid to be used every day to reduce inflammation and improve his breathing,
- He's not refilled this prescription in the last 45 days because he thinks that his breathing has improved,
- He's not had a flu shot in the last 12 months,
- He's just purchased cigarettes with his groceries,
- Dr. Shaw is Bill's Primary Care Provider,
- Bill just scheduled an appointment with Dr. Shaw for tomorrow.

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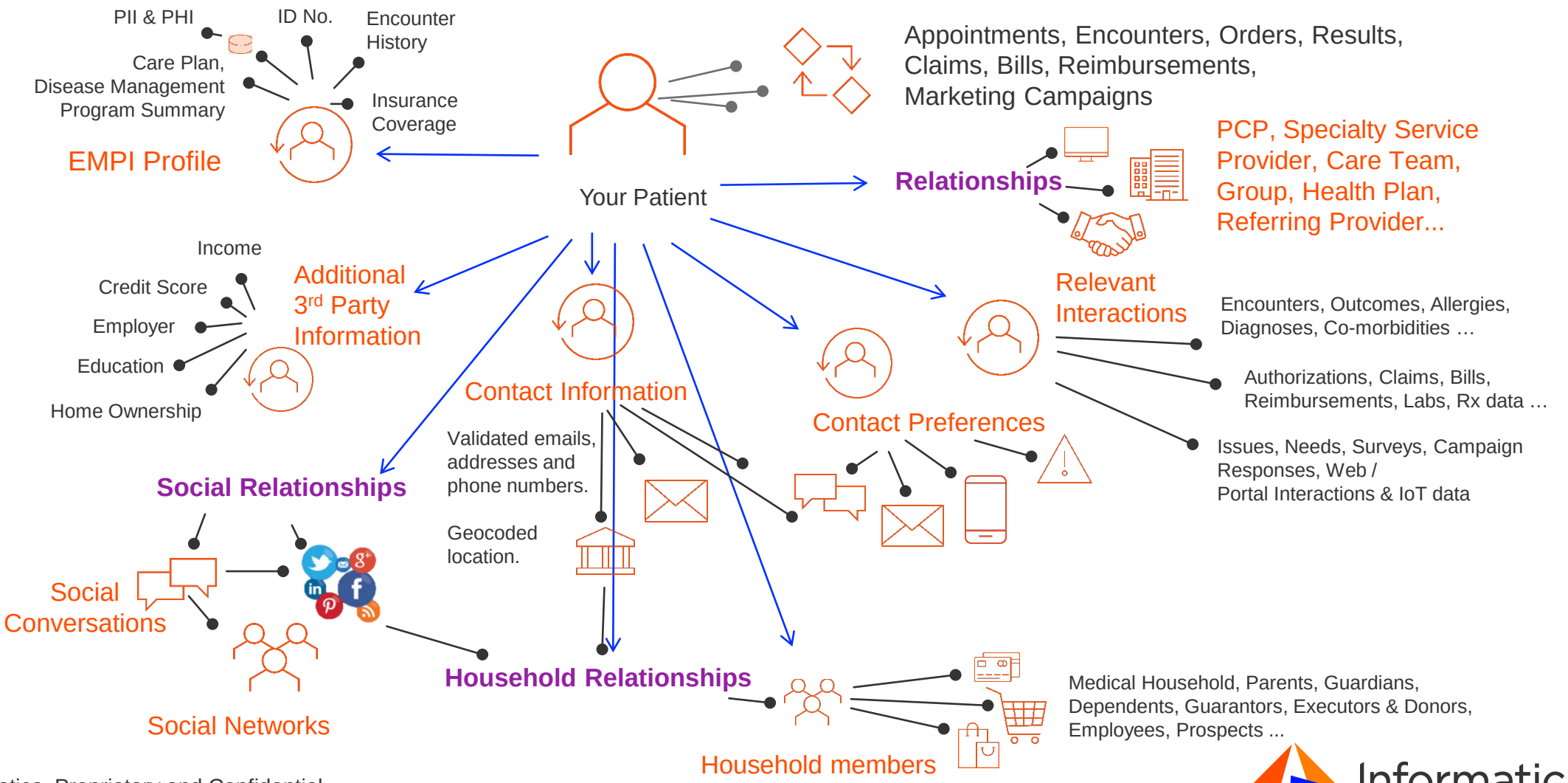
An intelligent view of your **Patients**



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Multi-domain MDM domains ‘Live in Production Today

Built for Flexibility, Variability, Complexity and Scalability

- Patient
- Member
- Provider
- Facility / Location
- Organization
- Employee
- Philanthropic Donor
- Health Plan
- Financial Hierarchy
- Reference Data
- Supplier / Vendor
- Contract
- Payer / Broker
- Item
- Prospect
- Study
- Genome
- Household

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Transamerica

Complex Customer Ecosystem

- Leading insurer with more than 27 million customers.
- Accelerated time to marketing insights by comparing and analyzing large data sets faster than ever before.
- Future proofed business decision making with a flexible, scalable and secure analytics data lake.
- Personalized customer experience with access to complete customer data across global operations.

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Cleveland Clinic

Focusing on Patient Health

- World-renowned healthcare provider committed to world-class care and a supportive environment.
- Enhance patient care outcomes and boost efficiency through accurate forecasting, from operating room to patient post-operative needs and in-home assistance.
- Transitioned from traditional BI reporting—accelerating time to insights with predictive analytics, enabling forecasting activity eight weeks out.
- Delivered timely, consistent, and “in-context” data to all medical staff with data governance, in support of patient health outcomes, while reducing costs, increasing revenue and streamlining payer contracts.

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healthfirst

Healthcare Consumer Engagement

- Not-for-profit managed care organization sponsored by the most prestigious hospitals in New York.
- Fast growing health plan with over 900,000 diverse members.
- Improve member care coordination and quality with a comprehensive understanding of members and associated providers across all policies.
- Foster loyalty with access to complete customer data across all operations.
- Adapt to the demands of changing regulations.

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CENTENE® Corporation

Member & Provider Engagement

- $40B diversified, multi-national healthcare organization operating in 29 U.S. States.
- Serving government sponsored healthcare programs with 11 million members.
- Improve member medical management, patient safety & risk adjustment accuracy for Medicare & Medicaid dual-eligible population.
- Enhance provider utilization as networks expand through M&A activity.
- Adopt an MDM platform for long-term growth to improve operational & analytic decisions, and drive future M&A activity.

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Unleash the Transformational Power of Your Data

- Manage your consumer and patient data as a mission-critical asset.
- Drive data accuracy of to improve health outcomes and reduce costs before they accrue.
- Put the right data directly in the hands of decision-makers to take action.

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