PROGRAM INTEGRITY COSTS LESS WITH ACTIONABLE DATA

Health Market Science

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National Association of Medicare Program Integrity Conference

August 19, 2013

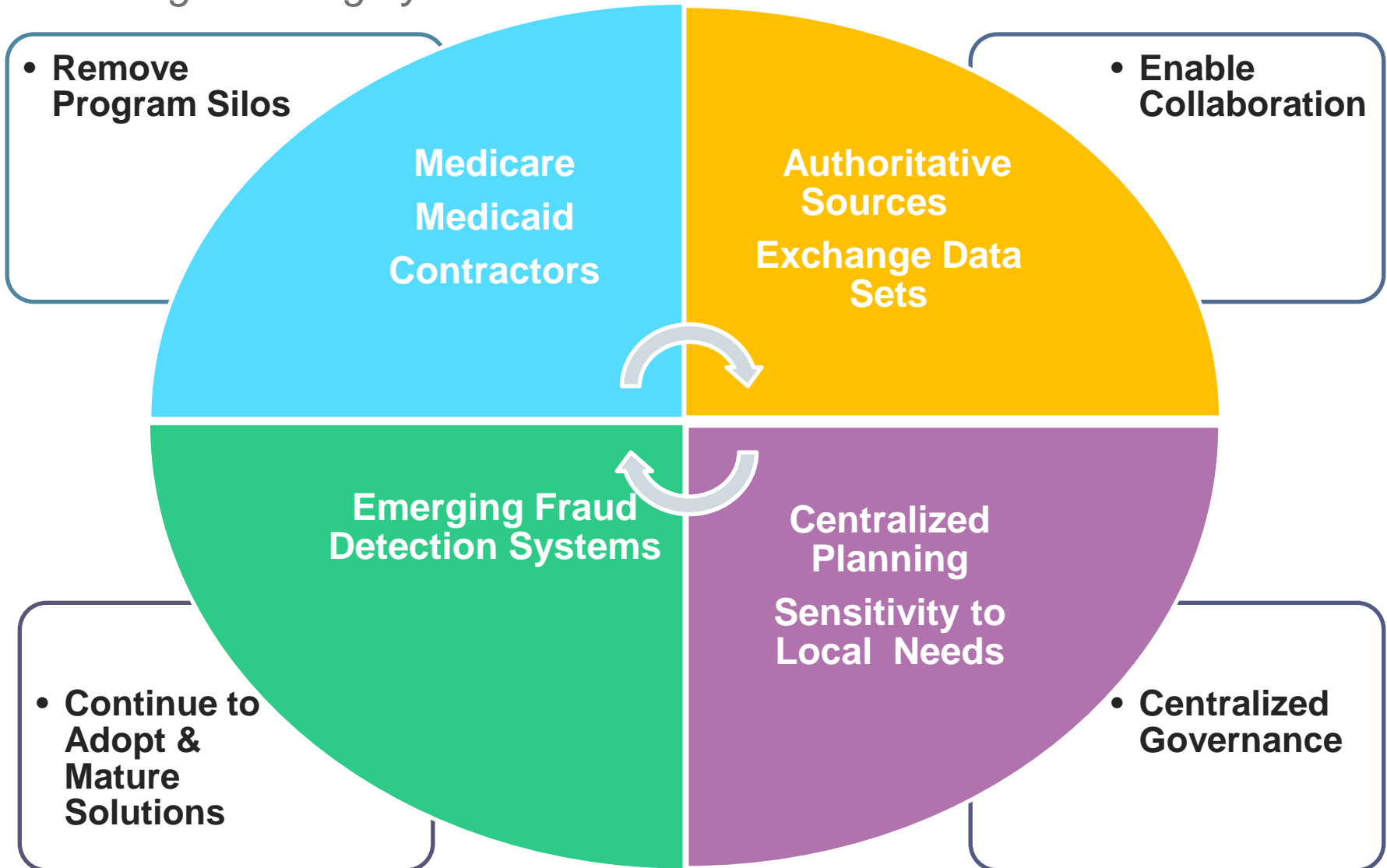# I know what you're thinking…

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Agenda

- Program Integrity Goals

- Current Challenges

- What is Big Data and how does it impact Program Integrity

- Big Data in Action – A Case Study

- Big Data Return

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Program Integrity Goals

Unified Program Integrity

- **Remove Program Silos**

Medicare Medicaid Contractors

- **Enable Collaboration**

Authoritative Sources Exchange Data Sets

- **Continue to Adopt & Mature Solutions**

Emerging Fraud Detection Systems

Centralized Planning Sensitivity to Local Needs

- **Centralized Governance**

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Challenges – Disconnect Across the Board

- Provider Data
  - › No central, reliable crosswalk to match provider identities
  - › State Medicaid rosters vary in content and fill-rates or may be unavailable

- Claims
  - › Missing service descriptions
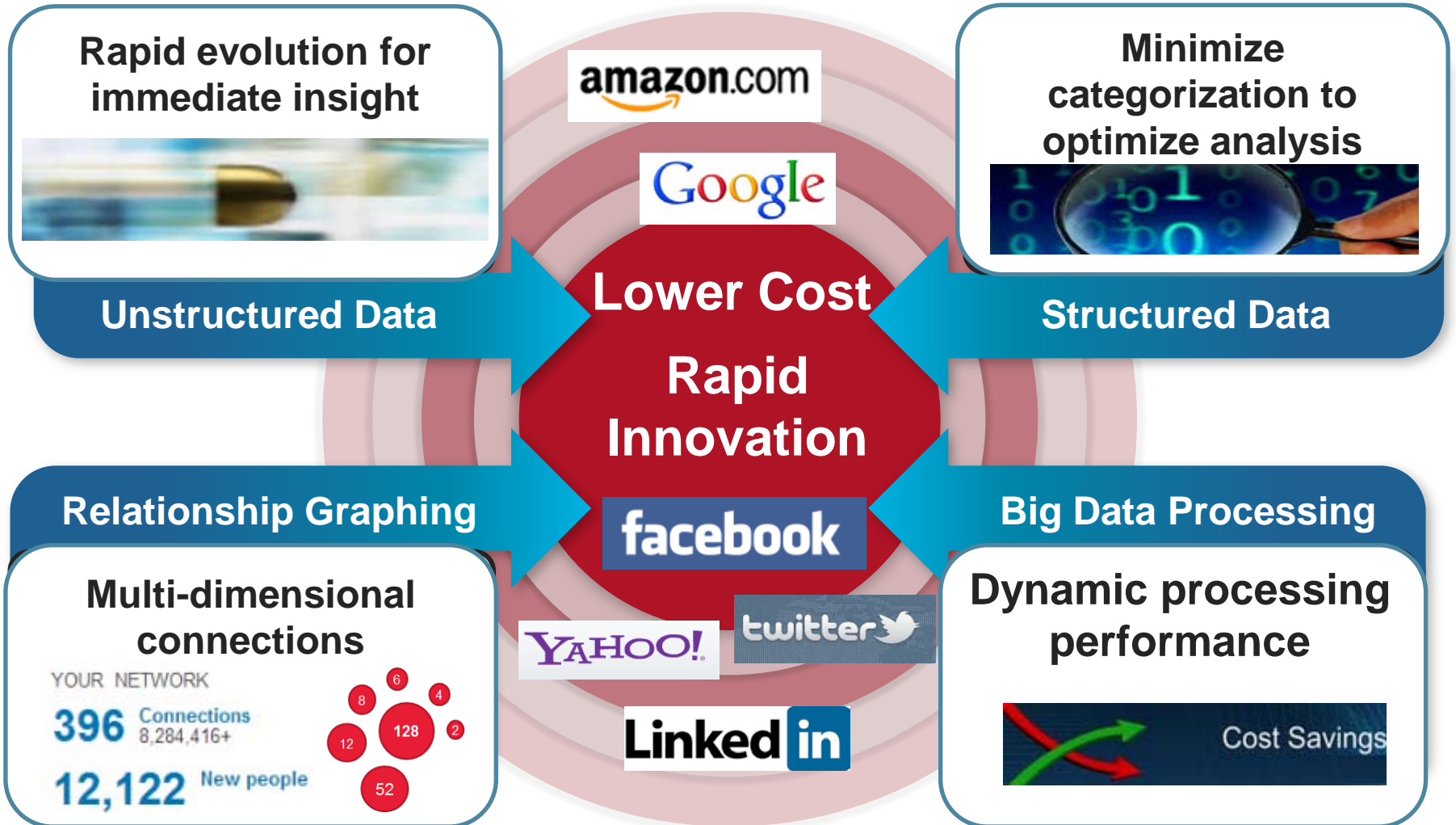 - › Incomplete beneficiary information

- MMIS Limitations
  - › Lack of provider information
  - › Incomplete payment and billing information
  - › Beneficiary discrepancies
  - › Data latency
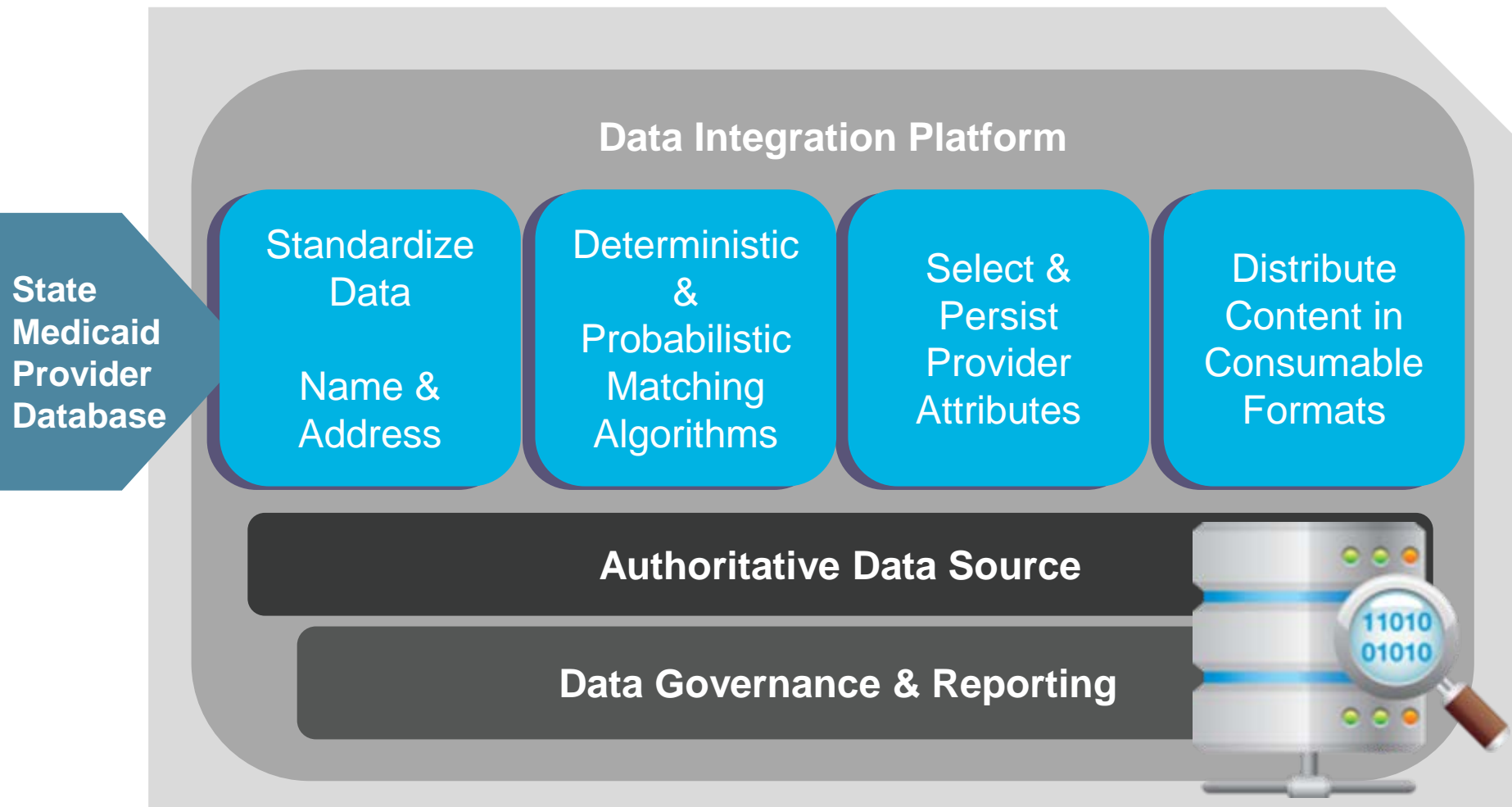 - › False negatives and positives

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Big Data Overview

What's the big deal?

Rapid evolution for immediate insight

Unstructured Data

Minimize categorization to optimize analysis

Structured Data

Lower Cost

Rapid Innovation

amazon.com

Google

facebook

YAHOO!

twitter

Linked in

Relationship Graphing

Multi-dimensional connections

YOUR NETWORK

396 Connections 8,284,416+

12,122 New people

6
8   4
128
12   2
52

Big Data Processing

Dynamic processing performance

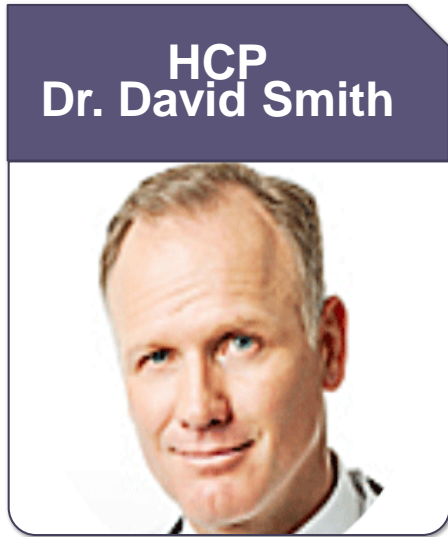Cost Savings

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Big Data in Action – Master Data Management

State Medicaid Agency utilizes a MDM solution with an authoritative data source to cleanse and enrich their file and provide ongoing data maintenance

State Medicaid Provider Database

Data Integration Platform

| Standardize Data

Name & Address | Deterministic & Probabilistic Matching Algorithms | Select & Persist Provider Attributes | Distribute Content in Consumable Formats |

Authoritative Data Source

Data Governance & Reporting

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Big Data in Action – A Case Study

HCP
Dr. David Smith

- Program Integrity is suspicious of Dr. David Smith

- Dr. Smith is billing under his state Medicaid ID

24657895235256246578
95235256789874533221
55326345624682925219
46487947898745332215
53263456224657895235
25678987453322155326
34562246982925281946
48794246982922465246
57895235256789874533
22155326345622469829
25281946487478952352
56789874533221553263
45622468292528194648
79452819464879424657
89523525678987453322
15532634562246982925
2194648794

Initial Data Mining Results:

- Medicaid Identifiers
- Eligibility ✔
- Claims Volume

Hospital

Consistent Practice

Group Practice

LTC Facility
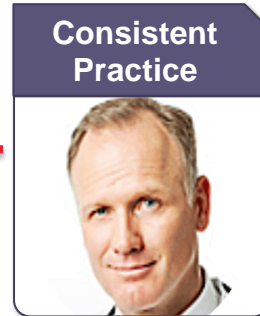
Dr. David Smith
Mental Healthcare
Provider

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Current Solution Limitations

**HCP
Dr. D. L. Smith**
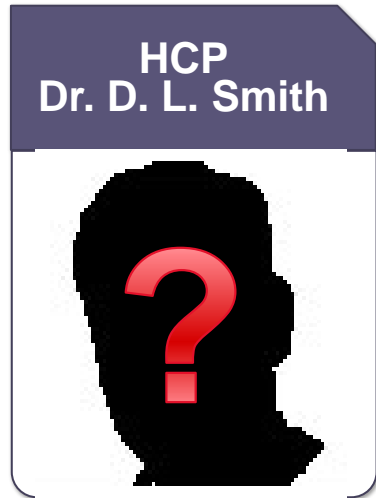
Mental Health Physician
Billing Medicaid – No Medicaid Identifier
Organization NPI – Group Practice
Claims Volume – 80% Practice Workload

✗ Common Name

✓ Common Specialty

✗ Social Security or DOB

✗ Credentials

✗ Practice Locations

M✗ch

**HCP
Dr. David Smith**

Mental Health Physician
Billing Medicaid – Type 1 NPI Identifier
Affiliations - Group Practice, Hospital, LTC
Claims Volume – Consistent with Locations

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The Power of Big Data

MDM in Action

Dr. D. L. Smith

Speciality	**Mental Health**
NPI #	**707070111 (Type 2)**
Medicaid ID #	**Missing**
State License #	**Missing**
Practice Location	**260 West Street Nowhere, XX, 88888**

Dr. David Smith

Speciality	**Mental Health**
NPI #	**12353646 (Type 1)**
Medicaid ID #	**547757**
State License #	**123788**
Practice Location	**100 Main Street Anytown, XX, 99999**

Extract, Transform, Load (ETL)

Content Standardized

Consistent Naming

Addresses (CASS Certified)

Confirmed Place of Business

Geocoding

Locations 200 miles apart

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Authoritative Sources and Actionable Insight

HCP
Dr. D. L. Smith

Speciality	**Mental Health**
NPI #	**707070111 (Type 2)**
Medicaid ID #	**Missing**
State License #	**Missing**
Practice Location	**260 West Street Nowhere, XX, 88888**

Authoritative Source Confirms Provider & Affiliation

HCP
Dr. David L. Smith

Match & Validate

Authoritative Source
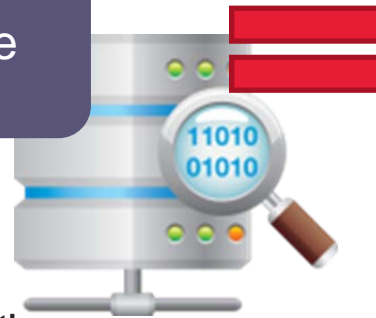
HCP
Dr. David L. Smith

Speciality	**Mental Health**
NPI #	**12353646 (Type 1)**
Medicaid ID #	**547757**
State License #	**123788**
Practice Location	**100 Main Street Anytown, XX, 99999**

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Authoritative Source Provides Actionable Insight

Authoritative Source

- Confirms additional practice location for Dr. Smith
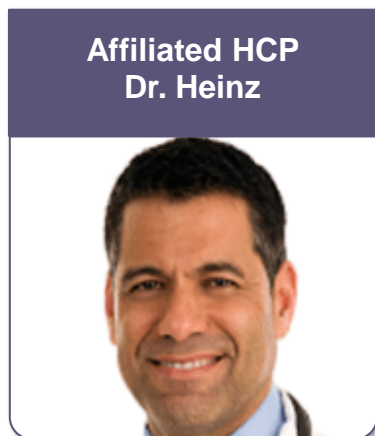- Identifies affiliated providers at second location

**Mid-Level HCP
Mr. Baker, P.A.**
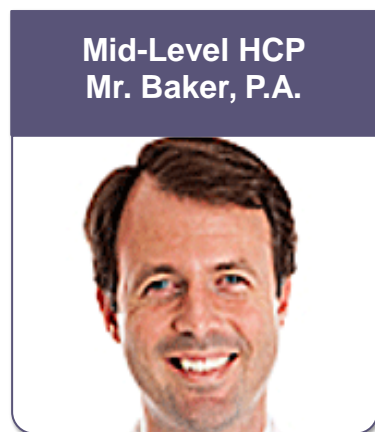
New insights

Assessment

No claims for
Mid-level

Dr. Smith is only
provider eligible to
bill state Medicaid

**Affiliated HCP
Dr. Heinz**

Site visit scheduled

Past Termination
Excluded from Federal Programs
Billing under the organization NPI
 as Dr. D. L. Smith

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Big Data Return

Site visit confirms Dr. Heinz billing under the org NPI as Dr. D. L. Smith

Dr. David L. Smith
a.k.a. Dr. D. L. Smith

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Big Data Considerations

Data Integration Platform

✓	**Extract, Transform, Load (ETL)**	• Ability to interface with any system • Batch, Transactional • Name & address standardization (CASS certified)
✓	**Match**	Deterministic and probabilistic matching algorithms
✓	**Consolidate**	Flexibility to select and persist best of breed provider attributes
✓	**Publish**	Distribute content in a consumable format

Authoritative Source

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Authoritative Source and Actionable Insight

> 6 million Healthcare Providers

- Physicians (MD, DO)
- Dentists (DDS, DMD)
- Advanced Practice Nurses
- Optometrists
- Physician Assistants
- Podiatrists
- Veterinarians
- Assistive Providers
- Alternative Providers
- Behavioral Providers

> 1.4 million Healthcare Organizations

- Ambulance
- Ambulatory Care Centers
- Accountable Care Orgs
- Clinics
- Medical Equipment \ Supplies
- Extended Care
- Group Practices
- Hospitals
- Imaging
- Lab
- Pharmacy
- Research

Attributes (Current and Historical)

Name	Status	Schools Attended
Facility Type	Federal, State	Languages
Specialties	Sanctions	Accreditations
Credentials	DOB, DOD	Tax Id
State Licenses	DSH	Affiliations
DEA	340B	Medicaid
NPI	Practice Location	Participation

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Data Governance

Key Features

Tiered Accessibility
- › Permissions by Role
- › Full Access - Administrator
- › Limited - Editor, Viewer

Rich Functionality
- › User portal for data review and maintenance
- › Transactional application performs real-time record updates

Entity Maintenance
- › Merging of duplicate entities
- › Split intertwined entities, e.g., Father-Son scenarios

Research and Analysis Tools
- › View raw source data contributing to the Golden Record
- › View link movement history

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Comparisons: On-premise and Hosted MDM

On-premise	Hosted
In-house resources to operate and maintain MDM solution	**Reduced** in-house resources need for fully-hosted customer MDM solution
Mature matching engine	Specialized matching engines
Infrastructure, software and hardware licensing are all managed internally or hosted by supplier	Infrastructure, software and hardware licensing are all managed by supplier
Deep MDM expertise required	Resources are freed to focus on other core business needs
Third party customer data source integration and ongoing quality demands managed by internal data experts	Native authoritative data source managed by Vendor
MDM business process partner needed to achieve corporate efficiency and compliance goals	Fully outsourced business processing improves corporate efficiency and supports compliance goals

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Big Data Return
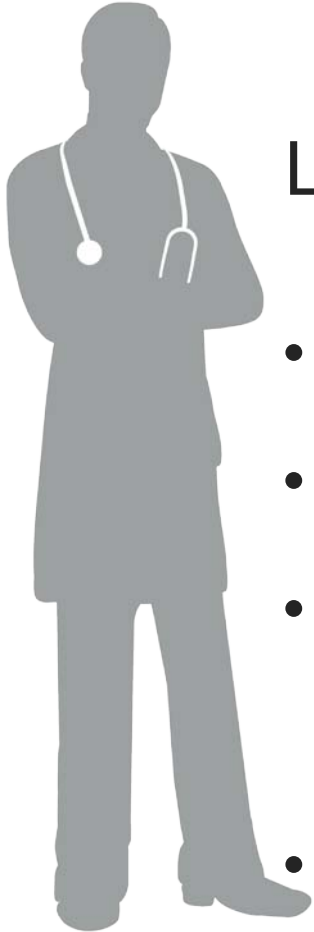
Leveraging Big Data Technology

- High risk providers are identified and monitored for changes

- Fraud patterns and hidden partners are detected

- System capabilities streamline integration, powering analytics

- Overall costs associated with combating fraud are reduced

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Thank You

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