



Powering the Connected Healthcare Ecosystem



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Chief Medical Officer and
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-Performance Assessment
- Managing Populations and Processes

Optum: The Industry Leader in Healthcare Informatics

- Delivering solutions that are integrated, intelligent, actionable and fluid
- Build, implement & enable Sustainable Health Communities
- 30,000+ employees worldwide
- \$25 billion+ in revenue 2010
- Providing services to the entire health ecosystem, including nearly 250,000 health professionals and physician practices, 6,200 hospitals touching 60 million individuals

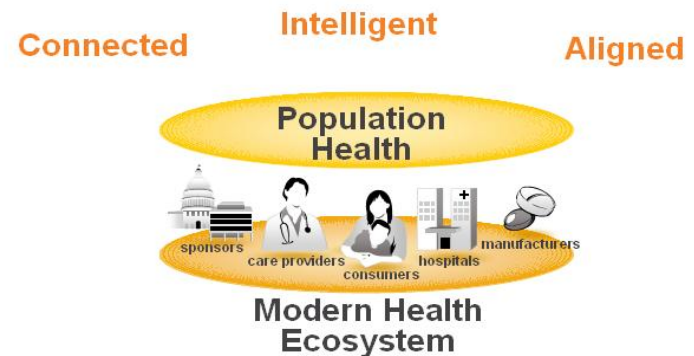
We are passionate advocates for the use of health information to save lives, improve care and solve fundamental problems in health care.

We measure our success through the success of our clients.

The role of data quality in the ability to manage populations and processes within our organization and for our clients and partners

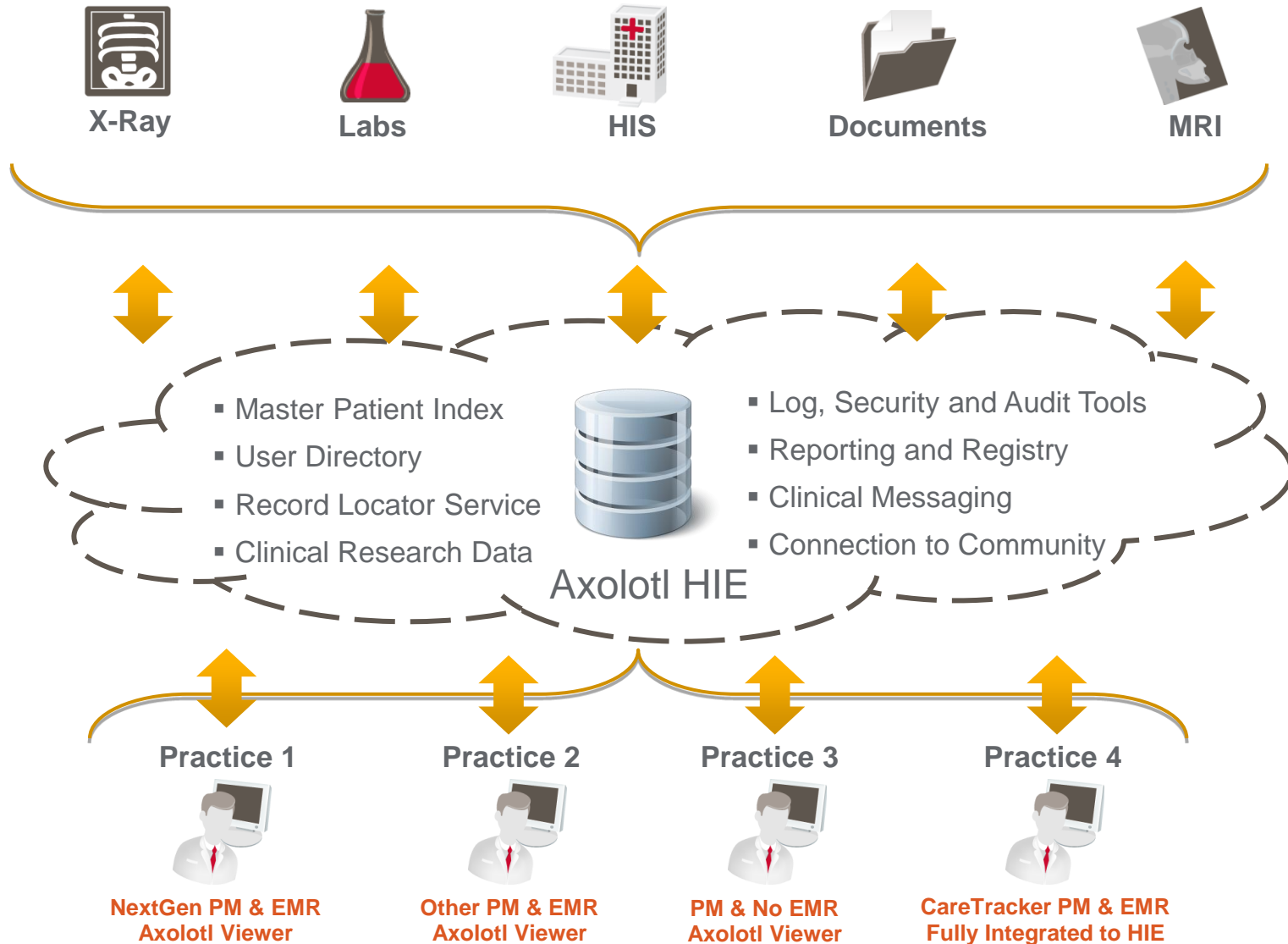
- Actionable data at the point of care and population management providing information to improve patient care and reduce cost.
- Our business requires a platform to aggregate and standardize shared data across the care continuum.
- Connecting the healthcare community by transforming healthcare data silos into healthcare data liquidity.
- This allows us to optimize care quality, lower cost and enhance patient experience
- Utilization of actionable & intelligent information across the healthcare continuum to deliver accountable care.

Helping Enable Sustainable Private HIEs

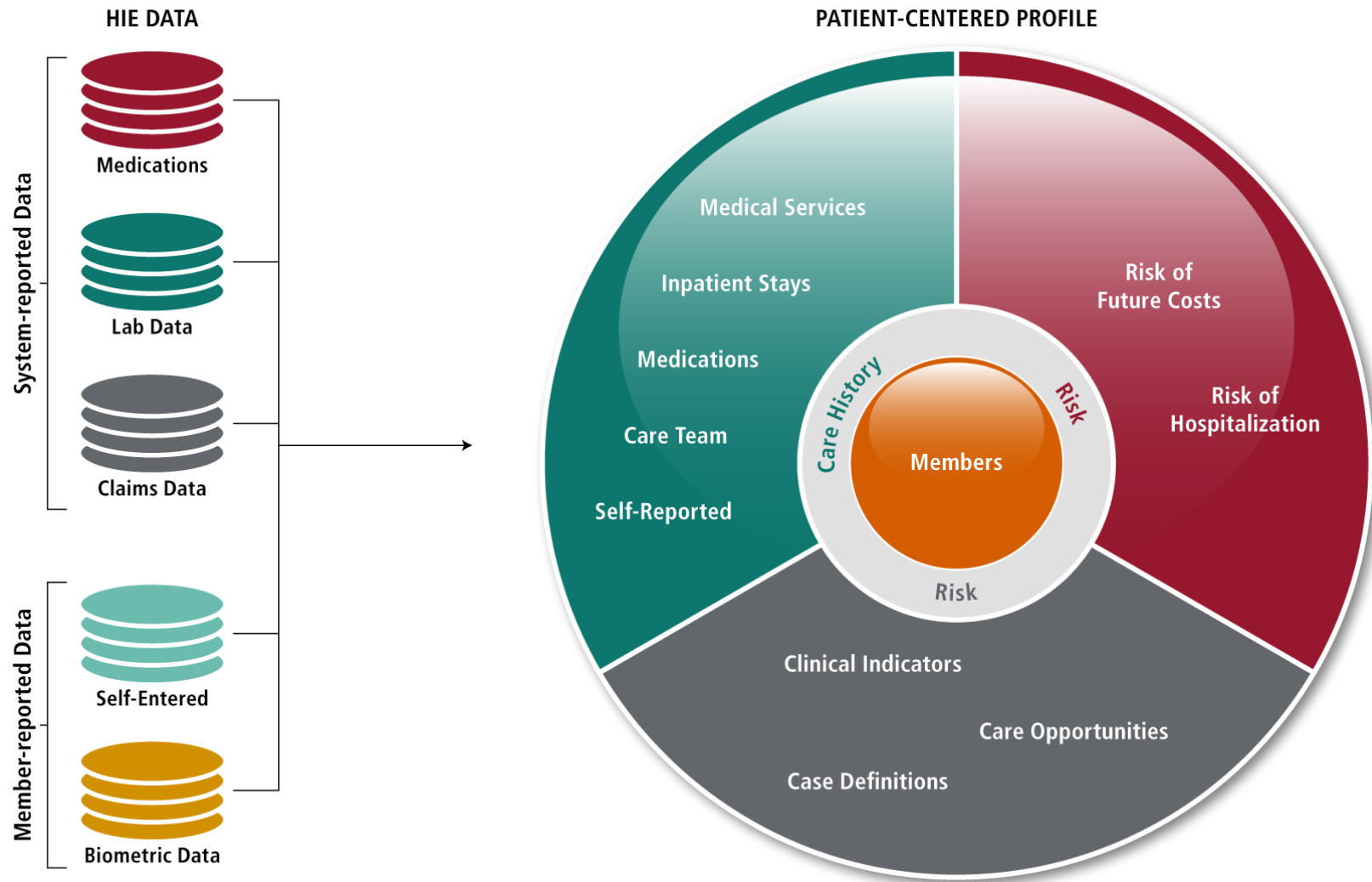


Optimized care quality, cost and patient experience

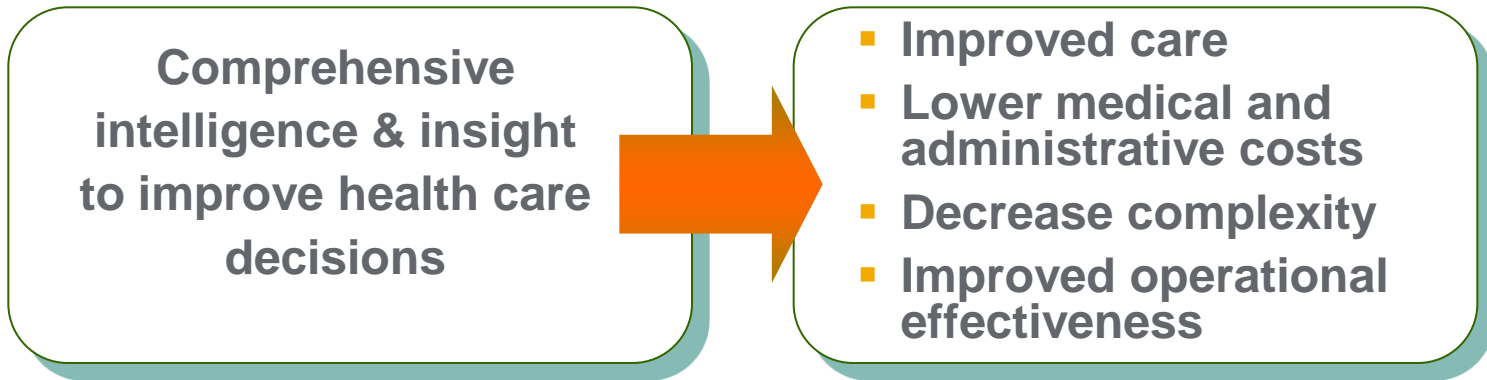
Step 1: Easy Provider Access to Information



Step 2: Align by Standardizing Data

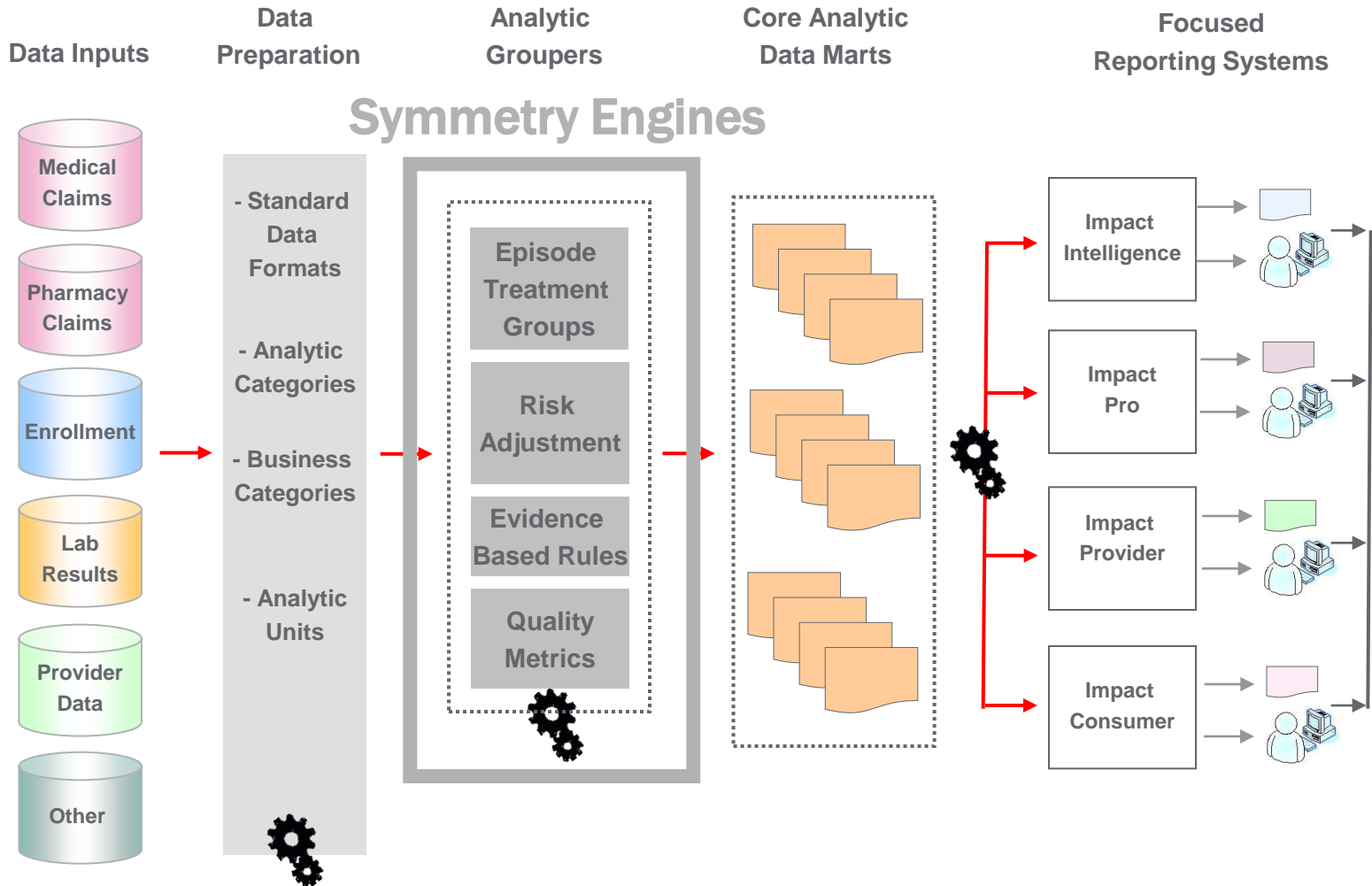


Step 3: Provide the Power of Integrated Actionable Information



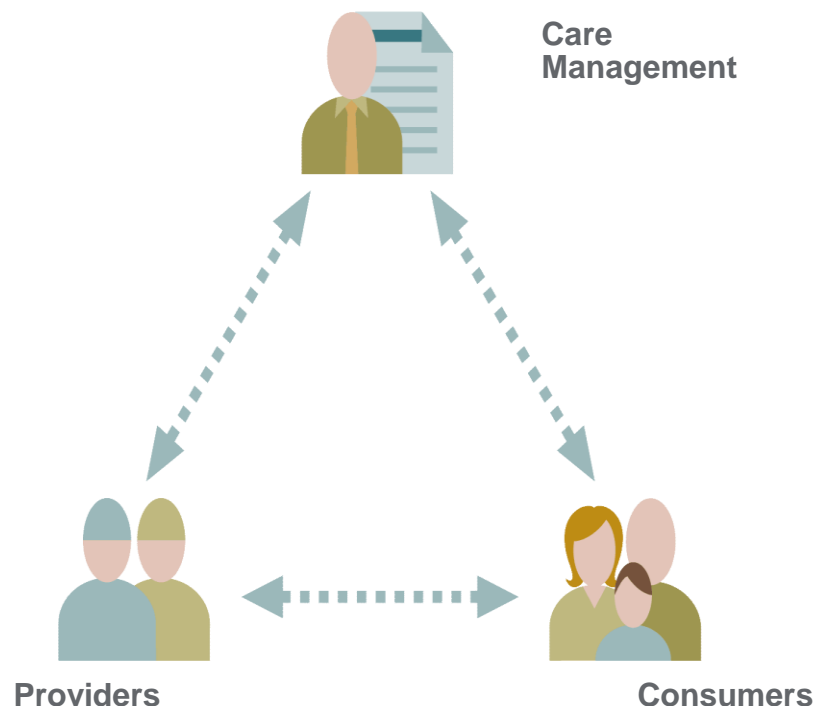
- Private & Public Health Information Exchange – **Axolotl**
- Ambulatory Practice Management and EHR- **CareTracker**
- Patient Portal – **HealthTracker**
- Analytics to create actionable data - **Discover & Impact Suites**
- Care Management - **eSync™ & eVisor™ Platform**

Impact Suite Overview – Technology Platform



State of Shared Information in Healthcare

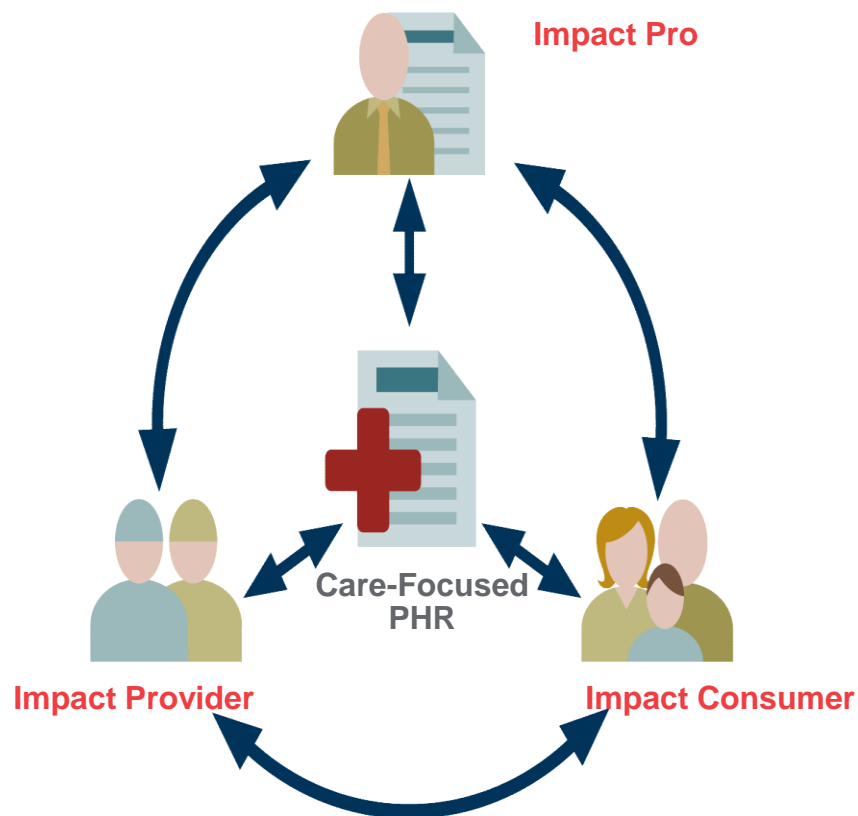
- **Care Managers** – health information based on claims, lab results or HRAs
- **Providers** – health information based on services their practice performed
- **Consumers** – health information based on what they remember or understand



Ingenix Solution

Sharing Information Among all Constituents

- **Impact Pro** – enables informed care managers to coordinate care with consumers and providers
- **Impact Provider** – enables prepared physician practice teams to deliver better, proactive care
- **Impact Consumer** – enables informed, engaged consumers to make better health decisions










Impact Intelligence & Impact Pro - Comparison

	Impact Intelligence	Impact Pro
Type of Model	<p>Population focused (can drill to individual) Health Risk assessment.</p> <p>Symmetry Methodologies – no EBM Rules Editor yet.</p>	<p>Prospective Health Risk Assessment – member level (can be rolled up to group level).</p> <p>Symmetry Methodologies + add'l risk markers. Can modify care opportunities.</p>
Primary Business Application	<p>Plan-wide Decision Support and Analytical tool – Trend, ROI, Group Reporting and provider performance analytics.</p>	<p>Complex care management; disease management; actuarial analysis and underwriting.</p>
Objective	<p>Measure and profile population illness burden and associated risk (cost) and quality metrics.</p> <p>Customizable reporting structure. OLAP Cubes for ad-hoc analyses.</p>	<p>Risk measurement and stratification – identify and characterize future high risk members, group-level measures of risk to support underwriting. Symmetry risk modeling, plus add'l risk markers such as recency and volume of episode clusters, ER visits, etc.</p> <p>All clients include custom flags for refined filtering capabilities.</p>
Technology Elements	<p>Processing Engine – Datamart – Reporting Engine – OLAP Cubes</p> <p>Microsoft web based.</p>	<p>Processing Engine – Datamart – Reporting Engine</p> <p>Microsoft web based.</p>

The eSyncSM Platform

Comprehensive, Synchronized, Personalized

Synchronize diverse data points to monitor population needs

-  Claims data
-  Pharmacy data
-  Lab data (for select)
-  Health assessment results
-  Biometric data
-  Network and quality and efficiency rated physician utilization
-  Operational interactions



Staying Healthy



Getting Healthy



Living with a Condition

List of Individuals with Risk, Future Costs, & Inpatient Stay Probability

HOME MEMBER LIST POPULATION LIST REPORTS ADMINISTRATION

SEARCH Members By Member ID Enter Search Value

[Back to Reports](#) Print Save Export

Actionable Diabetics Filter Members Columns

Filter:
 The report includes only members who have any of the following Episode: "Diabetes, w/o surgery", "Diabetes, with surgery".
 The report includes only members who have any of the following Risk Categories: "Diabetes".
 Members who have any of the following Clinical Indicators: "Cancer", "Dialysis", "Renal Failure" were excluded from the current report.
 The report includes only members who have any of the following Care Opportunities: "Diabetes".
 The report includes only members who have any of the following EBM Care Opportunities: "Diabetes".

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Link	Member ID	Sex	Age	C/M Primary Risk Category	Future Risk, Costs	Future Risk, Inpatient	Inpatient Stay Probability	Prior Total Costs (Annualized)	Prior Rx Costs (Annualized)	Future Costs
✓	000003890	Female	47	Diabetes	1.92	2.66	8.5 %	\$1,406	\$332	\$5,690
✓	0000104180	Female	82	Diabetes	2.53	4.54	14.5 %	\$4,797	\$2,527	\$7,500
✓	0000147296	Female	59	Diabetes	2.27	2.12	6.7 %	\$2,441	\$0	\$6,740
✓	0000215182	Female	63	Diabetes	4.01	4.46	14.2 %	\$24,540	\$6,385	\$11,870
✓	0000218908	Female	57	Diabetes	2.99	2.07	6.6 %	\$18,431	\$5,774	\$8,850
✓	0000230211	Male	13	Diabetes	3.27	0.93	3.0 %	\$18,441	\$7,999	\$9,680
✓	0000292625	Female	41	Diabetes	1.73	1.52	4.8 %	\$7,794	\$2,338	\$5,130
✓	0000299435	Female	67	Diabetes	9.08	19.54	62.1 %	\$58,541	\$4,680	\$26,910
✓	0000389411	Male	50	Diabetes	1.52	1.59	5.1 %	\$3,198	\$1,335	\$4,520
✓	0000410028	Male	56	Diabetes	1.70	2.32	7.4 %	\$5,885	\$1,009	\$5,030
✓	0000416933	Male	62	Diabetes	4.69	2.32	7.4 %	\$19,910	\$13,292	\$13,890

DATA CHALLENGES

- **Member/Individual**

- No national member ID
- Of people using health exchanges, 50% will have eligibility for Medicaid at some point during the year
- How do we address the care of people who don't come in for services?

- **Provider**

- Inconsistent use of NPI
- Difficult data aggregation across provider and hospital groups

- **Administrative Data**

- Migration from ICD-9 to ICD-10 extrapolates from fewer data points to more
- Limited clinical data tied to claims and provider resistance to do so
- Data designed for FFS billing rather than P4P

- **Clinical Data**

- Minimal use of national registries
- 85% of data in EHRs is administrative
- Inconsistent and incomplete data

ADMINISTRATIVE DATA SETS

- Terabyte databases
- Real world data
 - RCTs are very valuable, but significant exclusions limit extrapolation to broader populations
- Claims data is to a large extent standardized
 - Patient ID – name, DOB, sex
 - E&M, procedure, or test
 - Diagnosis or results
 - Place of Service
 - Rendering Provider
Ordering Provider
 - Member phone number***
 - Member address
- Utilization data is arguably more robust
 - Practice variation, complications



Appendix

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Optum Health Care Solutions
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