Report Preview

2019 PAYER ANALYTICS

CURRENT TOOLS AND SOLUTIONS FOR HEALTHCARE PAYERS

CHILMARK RESEARCH

MARKET TRENDS REPORT

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Chilmark Research is a global research and advisory firm whose sole focus is the market for healthcare IT solutions. This focus allows us to provide our clients with the most in-depth and accurate research on the critical technology and adoption trends occurring throughout the healthcare sector. Areas of current research focus include among others: Healthcare interoperability, Cloud-computing Models for Healthcare, IT-enabled Accountable Care Organizations, Care Coordination, Adoption of Mobile Technology and Consumer-facing Health & Wellness Applications and Services.

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In 2012, Chilmark Research launched the Chilmark Advisory Service (CAS) in direct response to clients' request for a continuous feed of research on the most pertinent trends in the adoption and use of healthcare IT. This is an annual subscription that provides not only access to a number of re-search reports throughout the year, but also direct access to Chilmark Research analysts to answer specific client needs. Please contact us directly for further information about CAS.

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Chapter 1: Executive Summary

Organizations responsible for paying for healthcare – health insurance carriers, health plans, employers, and governmental organizations – rely on analytics and reporting software to improve performance and better understand their members and clinician networks. This report describes and evaluates the available analytics solutions from 18 vendors of such solutions. It reviews the current state of the market, categorizes the different kinds of vendors and solutions, and describes in some detail vendors' capabilities for meeting the needs of their payer customers.

Historically, payer analytics vendors used claims data almost exclusively. This data source, although time lagged, supports a robust set of applications that meet many performance improvement needs for different kinds of payers.

More recently, some payers have begun adopting analytics technology to support the transition from fee-for-service (FFS) to value-based care (VBC). The variety of pay-for-performance (P4P), pay-for reporting (P4R), and risk- and revenue-sharing programs with providers has caused payer organizations to invest in applications that help balance cost and quality through a better understanding of their members' healthcare needs and risks. These applications need combined provider and payer data to deliver insights to users. They allow payers and providers to share a common understanding of cost, quality, and utilization performance described in value-based care contracts.

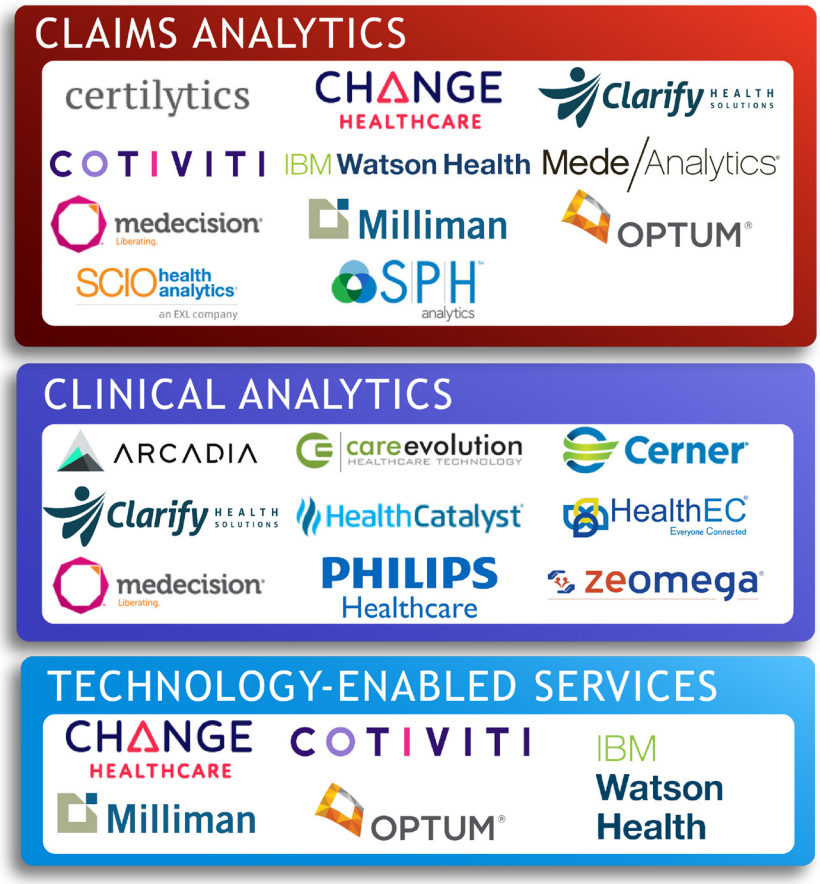

Figure 1.1: Payer Analytics Vendors by Category

The up-to-date and detailed information about members and populations found in provider data sources will potentially give payers more opportunities for performance improvement. A wider variety of new and emerging data types will also support different kinds of applications. As the healthcare system moves from volume to value, the combination of claims, clinical, and other data sources will be the minimum data set for analytics and reporting applications. While it is true that payers currently have limited, and in many cases, no access to provider data sources, that will change over time.

All of the vendors in this report deliver applications on a cloud-or SaaS-based subscription basis, often from a HITRUST-certified facility. All provide services and support necessary to set up the processes needed to ensure ongoing data availability for applications. The major categories of payer-oriented vendors that we see are the traditional claims analytics vendors, clinical analytics vendors, and technology-enabled services vendors.

Vendor analytics portfolios support the use of data to pursue important payer business goals. Payer analytics and reporting use cases fall generally into multiple areas: cost and quality management, value-based care, payment, and risk management.

KEY TAKEAWAYS

Quality and cost management are important drivers of adoption.

- Payers are strongly motivated to improve clinical quality performance and star ratings.
- Payers want better insight into the causes and drivers of cost growth.

Descriptive applications dominate.

- Applications provide comprehensive view of what has happened.
- Increasing availability of predictive analytics focuses attention on the likelihood of costs and discrete events.

Aggregated clinical and claims data will soon be table stakes.

- The combination of clinical and claims data provides up-to-the-minute view of members and cohorts.
- Access to clinical data sources outside of value-based contracts is a major obstacle.

Interest in advanced analytics is growing.

- Artificial intelligence (AI), machine learning (ML), and data science techniques and technologies are seeing more usage in vendor offerings.
- The most common use cases involve predictions.
- Natural language processing (NLP), despite its prevalence in clinical documentation improvement, is not widely used for analytics and reporting.
- No vendor has a leading advanced analytics solution.

Taking action based on analytics is still a challenge.

- The problem of “actionability” is more complex than simply presenting data to a user.
- Translating payer insights into provider action is an organizational challenge.
- Payers have not established reliable and consistent ways to engage and motivate clinicians, but financial incentives are effective.

Chapter 2: Payer Analytics Technologies and Applications

Healthcare payers sit at the center of the U.S. healthcare system. They partner with organizations across the healthcare delivery system to improve coordination and ensure their members receive the benefits they need. Understanding how the complex interactions between these organizations results in healthcare spending and care quality requires that payers fully marshal their data with modern software. Analytics and reporting applications contribute information and insight that enable successful payer performance improvement efforts.

Analytics Technology Review

Most of the vendors in this report use commercial relational, programming tools, and BI report writers to deliver a subscription-based, hosted set of reports and dashboards to their healthcare payer customers. The vendors manage the ingestion, processing, and integration of the diverse data feeds that fuel the applications. They clean, normalize, and standardize the data with healthcare-specific and conventional extract, transform, and load (ETL) tools and techniques prior to loading it into a relational database for use by applications. This includes an array of data quality assurance measures. Most maintain an enterprise data warehouse (EDW) and subsidiary data marts for standard and customer-specific reporting and dashboard applications. In a diminishing number of cases, all or part of the above runs in the customer's data center. This technology approach meets most current demands for payer organizations. It is a cost-effective way to address the demand for reporting and insights from end-users.

Moving from Descriptive to Prescriptive Analytics and Reporting

The applications based on this technology approach are primarily descriptive. They enable performance improvement with insights about performance-to-date. Users can then translate these insights into improved processes and workflows that deliver better real-world performance. Giving users a comprehensive over-the-horizon perspective on possible performance outcomes is still a challenge. To be fair, these applications provide a partial view of looming performance issues such as readmissions risks, likely medical spending, or changing risk scores – all important leading indicators of cost or quality issues.

This technology approach and these applications do a solid job of helping payers understand what has happened and, to a lesser extent, what is happening. They are less useful as tools for predicting what will or should happen. For more predictive and prescriptive analytics, the healthcare industry is turning to advanced analytics technologies.

Advanced Analytics for Payers

Vendors have begun to take advantage of newer technologies to get more value from data. Advanced analytics consists of multiple interrelated techniques and technologies. In general, vendors mean some combination of artificial intelligence (AI) and machine learning (ML), natural language processing (NLP) and extraction, and big data technologies. These technologies present new opportunities for analytics across multiple use cases. The expectation is that advanced analytics will ultimately provide more and better predictions, enabling application portfolios to become more prescriptive in clinical, administrative, and financial settings.

Artificial Intelligence and Machine Learning

Nearly all vendors in this report feature AI or ML elements in their offering. Sometimes referred to as cognitive computing or algorithms, vendors cite three broad areas of potential for AI/ML. At a member level, AI and ML will render specific insights and recommendations that will benefit point-of-care decision making and care planning generally. Second, AI/ML will support better population level insights. Third, it will also contribute to better

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Chapter 3: Payer Analytics Vendors

Vendor Types

All vendors in this report target payers and health plans. Most will admit that their primary competition is the internal IT resources of their customer. Value-based healthcare has been a major driver of sales for these vendors in recent years. Some dedicate themselves exclusively to supporting value-based use cases. Many vendors build analytics and reporting to meet wider, enterprise needs for different kinds of payers and payer organizations.

To develop this report, we talked to over 40 vendors of analytics solutions. We provide ratings and profiles on 18 different payer analytics vendors that met our inclusion criteria, described below.. Some vendors did not respond to our requests for information, including Cognizant, Edifecs, Inovalon, and Ciox Health. These companies have substantive product portfolios and health plan customer bases. We wanted to profile these companies but did not have enough information to include them.

All of the vendors in this report deliver applications remotely (cloud, hosted, or SaaS) on a subscription basis. Most provide services necessary to set up the processes needed to ensure data availability for their applications as well as user training. The major categories of payer-oriented vendors that we see are the traditional claims analytics vendors, clinical analytics vendors, and technology-enabled services vendors.

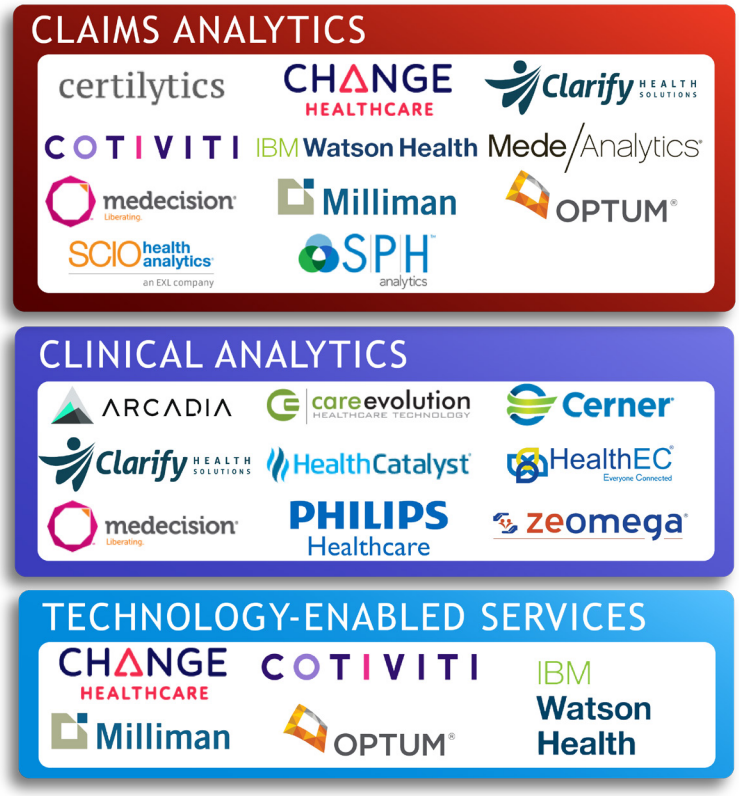

Figure 3.1: Vendors Categorized by Type

Inclusion Criteria

To be included in this report, vendors must have:

1. Offering with end-user functionality that is generally available.
2. Three live customers.
3. $1 million in analytics-related revenue from payers in 2018 or 2019.

We looked at technology from over 40 different vendors over the course of the last two years. Some vendors did not meet these criteria. There are also vendors that likely meet these criteria that we were unable to include because, as noted, we were unable to gather enough information. The 18 profiles contained here are our description and assessment of companies and offerings that meet all these criteria.

Vendor Category	Vendor Profiled	Characteristics
Traditional Claims Analytics	Certilytics, Change Healthcare, Clarify Health, Cotiviti, IBM Watson Health, MedeAnalytics, Medecision, Milliman, Optum, SCIO-EXL, SPH Analytics	> Deep exploration of claims data > Emphasis on cost and quality analytics > Historically constrained access to clinical data > Risk adjustment and scores

Table 3.1: Claims Analytics Vendors

Claims Analytics Vendors

Claims analytics companies rely heavily or exclusively on claims-related data to perform or deliver analytics and reporting. The analytics data stores from these vendors rely on multiple claims-related sources, most of which are refreshed monthly. This level of data currency can support descriptive analytics applications. Currently, very few payers or health plans produce real-time claims-based data for analytics and reporting applications.

Historically, these vendors sold analytics and reporting to health plans, employers, or governmental payers. Some are owned by insurers. Applications from many of these vendors emphasize cost reporting and utilization control. Many of these vendors have also amassed large quantities of benchmarking, risk, and member data that they make available to their customers for different purposes.

While providers have not enthusiastically adopted these products, many vendors have successfully sold into mostly large provider organizations. Claims analytics vendors have also not always had access to clinical data sources, in part because of their close association with payers or payer goals. Despite this, the growth of risk-sharing with providers has improved access to clinical data sources for claims analytics vendors. Applications from these vendors often deliver more sophisticated insights into risks, cost, and utilization compared to offerings from other vendor categories. As value overtakes volume in healthcare, claims analytics vendors will be increasingly attractive to provider organizations.

Clinical Analytics Vendors

Clinical analytics vendors have strong experience sourcing and using EHR-based data and aggregating it with payer data sources. They tend to be data source agnostic and can rightly boast of strong data management capabilities. They are often distinguished by their technical and operational rigor at data aggregation and integration. Most are independent, standalone companies but we also note that many EHR vendors have expressed an interest in serving payers.

In recent years, these vendors sold into provider organizations in value-based contracts who required good visibility into quality and cost performance. Payers and plans also bought these solutions to support their value-based contracts with providers.

Vendors Profiled	Characteristics
Arcadia, CareEvolution, Cerner, Clarify Health, Health Catalyst, HealthEC, Medecision, Philips, ZeOmega	> Expertise in aggregating clinical and claims data > Analytics data store is closer to real-time > Strong value-based offerings

Table 3.2: Clinical Analytics Vendors

Technology-enabled Services Vendors

Technology-enabled services vendors build solutions that rely more on services than on software. Using their own or commercially sourced software, these vendors offer professional services that contribute to performance improvement efforts. The deliverables and variety of services offered vary significantly from vendor to vendor and from engagement to engagement. Such vendors usually offer clinical or operational services in addition to or instead of the IT needed to enable a software-based offering. These companies often target large payers and plans.

Vendors Profiled	Characteristics
Change Healthcare, Cotiviti, IBM Watson Health, Milliman, Optum	> Attractive to large organizations > Highly customized deliverables > Strong services beyond IT

Table 3.3: Technology-enabled Services Vendors

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Appendix A: Acronyms Used

Acronym	Explanation
ACA	Affordable Care Act
ACO	Accountable care organization
AI	Artificial intelligence
ASO	Administrative services only
BI	Business Intelligence
CDC	Centers for Disease Control and Prevention
CDPS	Chronic Illness and Disability Payment System
CM	Care management
CM	Case management
CMS	Centers for Medicare & Medicaid Services
DM	Disease management
DSRIP	Delivery System Reform Incentive Payment
eCQM	e-clinical quality measure
ED	Emergency department
EDGE	External Data Gathering Environment
EDW	Enterprise data warehouse
ETL	Extract, transform, and load
FFS	Fee for service
FHIR	Fast Healthcare Interoperability Resources
HCC	Hierarchical condition categories
HEDIS	Healthcare Effectiveness Data and Information Set
HHS	Department of Health and Human Services
HIT	Healthcare information technology
HL7	Health Level 7
IT	Information technology
MA	Medicare Advantage

Acronym	Explanation
MARA	Milliman Advanced Risk Adjusters
MCO	Medicaid managed care organization
ML	Machine learning
MSO	Managed service organization
NCQA	National Committee for Quality Assurance
NLP	Natural language processing
NPR	Net patient revenue
ONC	Office of the National Coordinator for Health IT
PCP	Primary care provider
PHM	Population health management
PMPM	Per member per month
PPPM	Per patient per month
PPS	Performing provider system
PQA	Pharmacy Quality Alliance
QBP	Quality Bonus Program
RADV	Risk adjustment data validation
RAF	Risk adjustment factor
RPM	Remote patient monitoring
SaaS	Software as a service
SDoH	Social determinants of health
TPA	Third-party administrator
UM	Utilization management
URAC	Utilization Review Accreditation Commission
USCDI	U.S. Core Data for Interoperability
VBC	Value-based care
VBP	Value-based payment
VBR	Value-based reimbursement

Appendix B: Scope and Methodology

To compile this report, Chilmark Research combined extensive primary and secondary research techniques to create a composite profile for each vendor. Primary research was divided into two distinct steps, beginning with soliciting targeted vendors for their involvement in the research.

We asked participating vendors to complete a detailed questionnaire whose purpose was to collect qualitative and quantitative information about the company and the markets it serves. Questions included among others: 2018 revenue, number of employees, target market, number of organizations currently using its solution, and more in-depth questions regarding features and functions.

Upon receiving the completed questionnaire, we conducted a follow-up interview with each vendor. These in-depth telephone interviews typically lasted 60-90 minutes and were for a product demonstration and to clarify responses to the questionnaire. This portion of the research effort also focused on topics that cannot easily be captured within the context of a written questionnaire including competitive positioning, product roadmap, partnership strategy, and which solution features are most attractive to prospective customers.

Chilmark Research performed a final analysis of the vendors via secondary research and telephone interviews with end users and consultants that have advised on, deployed, or used a vendor's system. This information was compiled to provide the in-depth profile and ratings of each vendor. Prior to publication, all vendors were given an opportunity to review their profile narratives for accuracy. Their comments and feedback were considered and where relevant, incorporated into the final profile narratives.

In compiling this extensive report, Chilmark Research maintained absolute objectivity throughout the entire research process and it is our sincere hope that this report brings greater clarity to this developing market.

About the Author

BRIAN MURPHY - Report Author

Director of Research

Brian Murphy joined Chilmark Research as an industry analyst in August 2012 and brings a wealth of experience to the table. He is an outspoken advocate for true interoperability being the key to unlocking the potential of health IT and has centered the majority of his research efforts with Chilmark around this subject. He also currently heads research for the Analytics domain.

Brian has worked in the IT business for over 25 years, beginning his career in the field-sales organization of IBM. He then joined Yankee Group as an analyst, where he managed an enterprise software service and led research on the dynamics of the database market. Leaving Yankee, Brian joined Eclipsys prior to its acquisition by Allscripts in 2010. At Eclipsys, Brian worked with product managers to refine and harmonize value propositions in light of the organization's broader goals.

Brian is a graduate of both Harvard College and Suffolk Law School. When not thinking about health IT, he's a runner and armchair Boston historian.

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