Hype Cycle for U.S. Healthcare Payers, 2022

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Initiatives: Healthcare and Life Science Digital Transformation and Innovation

This Hype Cycle provides critical input for strategic planning by tracking the maturity level and adoption rate of payer technologies and deployment approaches. U.S. healthcare payer CIOs should use this to plan new and manage existing investments for business optimization and transformation.

Analysis

What You Need to Know

The healthcare industry is seeing an accelerating pace of change (see 2022 U.S. Healthcare Payer Business Drivers of Technology Decisions). The line between payer and provider is increasingly blurred, with payers rapidly launching or acquiring care delivery organizations. Provider-sponsored and provider-aligned health plans are making a comeback and emphasizing value-based care as the sustainable path forward. Unconventional competitors are entering and scaling their offerings in the healthcare market with increasing regularity, such as banking and financial services institutions, retailers, and telecommunications companies.

This Hype Cycle will help CIOs lean into technological and business change with emerging capabilities that enable the enterprise to adapt and respond to uncertainty and change. A key theme this year is the composable enterprise architecture, which will enable CIOs to flexibly reconfigure IT applications and meet new business requirements on demand (see Innovation Insight for Digital Healthcare Payer Platform). Interoperable data exchange across the healthcare continuum has never been more possible. Advanced analytics, automation and artificial intelligence (AI) are becoming pervasive components of use-case-based technology innovations, while stand-alone strategies and capabilities mature. Finally, healthcare core administrative processing solutions and adjacent systems are moving to the cloud.

Success will come from understanding the virtues of these emerging technologies and their combinatorial effect that will help deliver on the organization's most essential priorities.

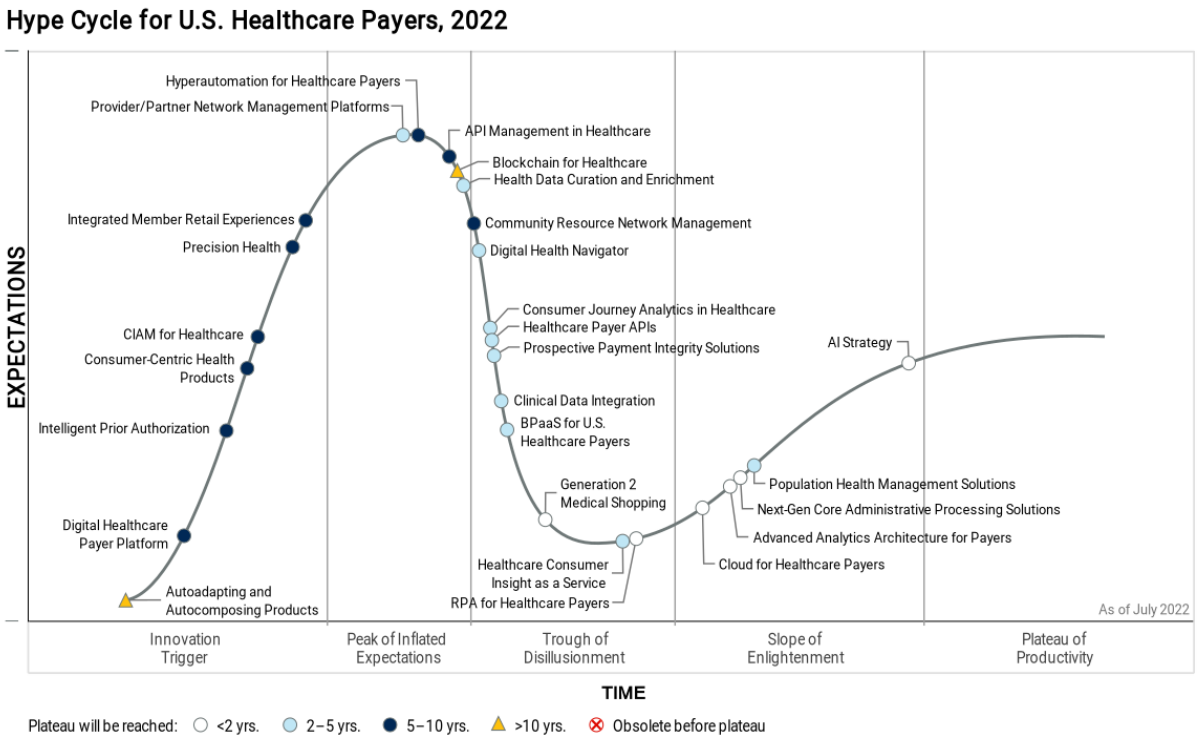
The Hype Cycle

Payers face relentless pressure for membership growth, increased emphasis on the role of experience in competitive differentiation (and significant weighting in Medicare Advantage Star Ratings), demands for administrative efficiency, and organizational adaptability. This Hype Cycle contains 27 innovations that support these goals and help position payers for various future scenarios. These innovations fall into two overarching categories (see Healthcare Payer CIOs Develop Digital KPIs to Optimize Current Operations and Realize New Revenue). These categories matter because they align with payers' business goals and investment rationales:

- **Digital optimization and modernization** — These technologies and approaches enable payers to digitally optimize current business processes, like business process as a service (BPaaS) for U.S. healthcare payers, next-generation core administrative processing solutions and robotic process automation (RPA) for healthcare payers. These innovations are important for the financial gain and efficiency improvements needed today. Innovations in this category include API management in healthcare, customer identity and access management (CIAM) for healthcare, and intelligent prior authorization.
- **Digital transformation and innovation** — These technologies and approaches have the potential to deliver transformative business benefits, like the digital healthcare payer platform, autoadapting and autocomposing products, and community resource network management. However, the organization must be prepared to embrace disruptive change to realize the full value. Innovations in this category include autoadapting and autocomposing products, as well as consumer-centric health products.

This research will help CIOs and executive peers evaluate and prioritize technologies to align with the organization's future vision and enterprise goals. By selecting the right technologies, timing and approaches, the organization can better meet the health value needs of members and purchasers alike, while increasing profitability and reinvestments.

Figure 1: Hype Cycle for U.S. Healthcare Payers, 2022



Source: Gartner (July 2022)

The Priority Matrix

The Priority Matrix is a summary companion to the Hype Cycle figure. It uses data from the benefit rating and time-to-plateau values for each technology, which plots the answers to two key questions:

- How much value could your organization expect to realize from the effective implementation of a particular technology?
- When will the technology be mature enough to help deliver that value?

Quickly maturing, high-importance transformational technologies are up and to the left of the Priority Matrix. Below them are technologies that are still important, but with a lesser scope of potential impact. On the right, you will find emerging technologies with great potential that are further away from their full maturity. Technologies with lower benefit ratings and longer times to value are listed in the Priority Matrix's lower-right sections.

Table 1: Priority Matrix for U.S. Healthcare Payers, 2022

(Enlarged table in Appendix)

Benefit	Years to Mainstream Adoption			
↓	Less Than 2 Years ↓	2 - 5 Years ↓	5 - 10 Years ↓	More Than 10 Years ↓
Transformational		Healthcare Payer APIs	Community Resource Network Management Consumer-Centric Health Products Digital Healthcare Payer Platform Hyperautomation for Healthcare Payers Precision Health	Autoadapting and Autocomposing Products Blockchain for Healthcare
High	Advanced Analytics Architecture for Payers AI Strategy Cloud for Healthcare Payers RPA for Healthcare Payers	Clinical Data Integration Consumer Journey Analytics in Healthcare Digital Health Navigator Health Data Curation and Enrichment Population Health Management Solutions Prospective Payment Integrity Solutions Provider/Partner Network Management Platforms	CIAM for Healthcare Integrated Member Retail Experiences Intelligent Prior Authorization	
Moderate	Generation 2 Medical Shopping Next-Gen Core Administrative Processing Solutions	BPaaS for U.S. Healthcare Payers Healthcare Consumer Insight as a Service	API Management in Healthcare	
Low				

Source: Gartner (July 2022)

Off the Hype Cycle

This year, we introduced a new Hype Cycle that is focused on healthcare data and analytics (D&A) capabilities (Hype Cycle for Healthcare Data, Analytics and AI). The following profiles are now represented in related innovations on the D&A Hype Cycle and are no longer on this Hype Cycle:

- Advanced Analytics in Provider/Partner Alignment
- Value-Based Payment Reconciliation Systems
- Healthcare Consumer Insight as a Service

We discontinued the following profiles due to shifting investment and solution emphasis on CRM and multiexperience development platforms (MXDPs):

- Provider/Partner Engagement Hubs
- Healthcare Consumer Engagement Hub

The following profiles have been absorbed into other innovations on this and other healthcare and life science Hype Cycles:

- Health Value Product Design
- Health Value from IoT
- Health Value in Virtual Care

We renamed the following profiles:

- Digital Analytics Architecture for Payers has become the Advanced Analytics Architecture for Payers.
- Intelligent Automation for Healthcare Payers has become Hyperautomation for Healthcare Payers.
- Digital Concierge Consumer Engagement Services has become Digital Health Navigator.

On the Rise

Autoadapting and Autocomposing Products

Analysis By: Mandi Bishop, Alistair Newton

Benefit Rating: Transformational

Market Penetration: Less than 1% of target audience

Maturity: Embryonic

Definition:

Autoadapting products adapt their structure, pricing, distribution and function within existing product configurations in response to external variables. Autocomposing products react to situational data to construct — or compose — new products, potentially across industries, designed to address specific customer needs. Autocomposing products will autonomously combine based on a series of predefined rules, leveraging subproduct components or services from multiple ecosystems on a real-time basis.

Why This Is Important

Health insurance products need reinvention. Advances in artificial intelligence (AI), data and analytics (D&A) capabilities and expansion of ecosystemwide interoperable data will influence how individuals, businesses and things consume products. These technology advances will enable autonomously-configured personalized products sourced and configured from industry and cross-industry ecosystems that sense and respond to their environments along with the context and situation in which they are consumed.

Business Impact

Autoadapting products offer payers the opportunity to develop more personalized products, tightly aligned to customer needs, and net new products and services addressing new demands. They aim for lower purchaser attrition as products adapt to the individual needs and context at the center of that adaptation. Autocomposing products will likely be orchestrated and initiated by nonhealthcare enterprises, with power shifting into the hands of the purchaser and away from the payer.

Drivers

- Autoadapting products offer an opportunity to increase member relevance and reduce resultant churn. They represent an opportunity to invoke a substantive shift from point-in-time, payer-defined product centricity to real-time, purchaser-defined service and customer centricity in enterprise thinking.
- The rise in composable architecture and thinking within enterprises is aligned with the increased role for ecosystem partner-driven business models to support diversified product adaptation and fulfillment.
- Digital products offer the potential for high levels of real-time adaptation and composition providing new products and services to meet life events, desires and needs of customers that could drive revenue opportunities.
- Payers are increasing their investment in integration technologies such as external and open APIs that enable frictionless value exchange. Out of the payer respondents to the 2022 Gartner CIO and Technology Executives Survey, 41% report these technologies as receiving the largest amount of new or additional funding this year. Furthermore, 71% report clinical data interoperability as a top-five investment priority.
- Consumer technology's expansion and acceptance into healthcare processes increases the data and insights available from touchpoints and real-time interaction opportunities that will shape new autoadapting product and service offerings.
- Autocomposing products will require sophisticated orchestration across industries in order to meet wider customer needs. They will rely on significant increases in the D&A and AI capabilities that underpin the composition of these new products and services. This complexity will cause autocomposing products to lag autoadapting products by a number of years.
- We believe this approach to products has transformative value potential, and introduce this profile at the Innovation Trigger. We expect that these products will take more than 10 years to achieve mainstream adoption.

Obstacles

- Insurance benefit contracts are rigidly controlled. Autoadapting and autocomposing products will require creative approaches to care management and wellness-focused benefit language.
- Monolithic payer architecture is a significant barrier to achieving the composable architectural foundations to externalize products, processes, algorithms and rules.

- Payers are reluctant to relinquish control over products that have been tightly-bound by the way actuaries price benefits. Autoadapting and autocomposing products will have to be positioned as program investments that save money over time.
- Privacy and security concerns, and potential regulatory restrictions will inhibit widespread adoption.
- Members do not trust their health insurance companies to make decisions in the individual's best interest, let alone to invoke changes on the purchaser's behalf.
- New governance models and methods must be developed to permit autoadapting and autocomposing within acceptable guard rails.

User Recommendations

- Host visioning workshops with executive colleagues to ascertain the enterprise's appetite for involvement in autoadapting and autocomposing product innovation.
- Partner with an innovative self-funded employer that has flexibility in its benefit offerings to develop and pilot an autoadapting product for its members, like automatically processing a specialist referral to a practitioner in a new geography when a member moves.
- Focus technology strategy on composability and invest in capabilities, such as ecosystem integration, data science and artificial intelligence/machine learning (AI/ML), to support new types and forms of partnerships, data. and business and operating models.
- Accelerate the shift to data-led, intelligent, real-time decision-making that such products will require.
- Adopt adaptive data and analytics governance to enable context-appropriate styles and mechanisms that address the diversity in time sensitivity, risk and complexity of use cases.

Gartner Recommended Reading

Quick Answer: How Will Autoadapting and Autocomposing Products Enable Digital Business Disruption?

Autonomous Business Is the Next Tech-Enabled Strategic Growth Curve for Pioneer Enterprises

How Payer CIOs Can Overcome Product Complexity Challenges to Grow New Revenue Streams

Digital Healthcare Payer Platform

Analysis By: Mandi Bishop

Benefit Rating: Transformational

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Definition:

The digital healthcare payer platform (DHPP) is an architectural approach that enables payers to adapt their business and operating models in response to external disruption and change in business strategy. The DHPP sources and integrates functionality from internal and partner applications to create packaged business capabilities (PBCs). Nontechnical and IT staff can use PBCs to compose valuable purchaser, provider, partner and employee experiences supporting complex roles and functions.

Why This Is Important

Payers' ability to innovate is limited by their monolithic core administrative processing solution (CAPS)-centric application portfolios. Architectural silos (such as member services disconnected from care management experiences) stifle innovation and slow digital transformation. Operational silos among products and separating business from IT inhibit organizational adaptability. The DHPP enables nimble and consistent responses to volatile regulatory and market forces.

Business Impact

The DHPP enables IT to match the pace of business change and respond effectively to business disruption. It achieves executive leadership's vision for the ecosystem role(s) the organization will play — not vendors' interpretations. It delivers new digital business capabilities across areas such as consumer engagement, provider alignment, real-time healthcare administration and population health management and empowers fusion teams to use PBCs to compose optimal experiences.

Drivers

- Competitive pressures from retailers and digital giants are increasing, and monolithic architecture cannot support the pace of business model adaptation payers need.
- Roles such as care manager and customer service representative are becoming more complex, requiring data and workflows that span application silos.
- The DHPP enables payers to reuse a common set of clinical, business and administrative capabilities in service to models such as self-insured group risk, medical management services and value-based care.
- The DHPP frees organizations to source PBCs as needed across a partner ecosystem.
- Hybrid work environments will persist and the need for collaboration between the business and IT will continue to grow as organizations move to renew their value proposition amid ongoing disruption.
- The vendor market is emerging and populated with proven enterprise-scale solutions. Vendors will largely deliver DHPP components through the public cloud as SaaS/PaaS offerings.
- CIOs and vendor partners are embracing and proliferating APIs, making composable architecture possible.
- As composability has become a key messaging strategy for vendors and a focal point for Gartner CIO interactions over the past year, we are advancing this profile past the Innovation Trigger. We expect mainstream adoption within five to 10 years.

Obstacles

- Many payers are investing in platform architectures and solutions today, but are not familiar with PBCs or how to engage with ecosystems.
- Most payers are bogged down by legacy thinking about business and operating model evolution enablement or have prohibitively risk-averse leaders. The paradigm shift from claims administrator to health value manager is slow, even when faced with existential threats from new and strengthening nontraditional competitors.
- Many platform vendors are espousing composability but continue to build walled gardens, not yet fully embracing PBCs sourced from external — possibly competing — ecosystem participants.

User Recommendations

- Align digital and IT strategy with existing business strategy through the power of people drawn from both business and IT backgrounds in the form of capability-aligned fusion teams.
- Evangelize the benefits of composable thinking and business enabled by composable architecture to executive peers to garner funding and support.
- Prioritize modular architecture and ecosystem integration capabilities in vendor solution evaluations across the current and future enterprise application portfolio.
- Modernize legacy applications to support the PBC model by exposing data and workflows through APIs.
- Ensure solutions are compatible with enterprise master data management strategy and solutions.

Sample Vendors

Amazon Web Services (AWS); Google; Microsoft; Pegasystems; Salesforce

Gartner Recommended Reading

Innovation Insight for Digital Healthcare Payer Platform

Tool: U.S. Healthcare Payer CIO Executive Presentation for Building the Composable Payer Business

Tool: Healthcare and Life Science CIOs Executive Presentation for Composable Data and Analytics

Creating the Composable Healthcare Organization for Healthcare and Life Science CIOs

Intelligent Prior Authorization

Analysis By: Connie Salgy

Benefit Rating: High

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Definition:

Intelligent prior authorizations are automated workflows by which a provider submits treatment notification for a payer's review or a predictive process that payers utilize to approve care. Intelligent prior authorizations use AI to automate the decision making, data exchange, and workflows between providers and payers to process requests for services while informing consumers of their approval status. These tools will reduce the high administrative burden associated with the process.

Why This Is Important

Prior authorizations (PAs) are often manual, rarely fully transparent or consistent, resulting in communication, accuracy and efficiency challenges for payers, providers and their consumers. Intelligent PA advances transparency about medical necessity determinations — automating the workflows and clinical data exchange to request and verify service authorization, reducing reliance on fax and phone calls and improving the total experience.

Business Impact

Intelligent PA tools and workflows have the potential to shift the clinical delivery models that exist today between payers and providers. They create a more collaborative approach to care delivery — increasing administrative efficiency for both payers and providers, and providing a frictionless experience for consumers. Payers and providers can earn consumers' trust and decrease the risk of adverse conditions or worsening illness by implementing and utilizing intelligent PA tools.

Drivers

- Payers process an estimated 182 million PA transactions per year according to the Medical Group Management Association (MGMA). Even though insurance verification and optimal claim submissions are done electronically in many, if not most hospitals, practices, and ancillary or outpatient departments, only a few use a fully automated solution for PA. With PAs being the least automated business function, it is easy to see where issues are bound to arise related to sheer volume.
- According to the American Medical Association's (AMA's) Prior Authorization Physician Survey, 94% of provider respondents reported care delays and 30% said that the often delayed process led to an adverse event for patients (i.e., death, hospitalization or a life-threatening event).
- One of the biggest challenges in providing timely care to patients is PAs. In another survey, the AMA found that 86% of practicing physicians described the administrative burden associated with PA as "high or extremely high" and 88% said the burden has gone up in the last five years. As the burden of PAs continues to increase, so does the need to manage the increasing challenges in delivering care.
- The Federal Interoperability and Prior Authorization proposed rule is an extension of the Interoperability and Patient Access final rule emphasizing the desperate need to improve health information exchange between patients, healthcare providers and payers. The proposed rule focuses on efforts to improve PA processes and technology, ensuring that patients remain at the center of their own care.
- The Centers for Medicare & Medicaid Services (CMS) interoperability mandate gives payers an opportunity to enable members to better manage their health with access to clinical and administrative data.

Obstacles

- Payers' varying approval requirements and complex benefit designs, and incomplete information from providers, commonly delivered by phone or fax thwart PA workflow and AI automation efforts.
- Legacy business process and rocky payer-provider relationships hinder progress. Real-time intelligent PA requires joint payer and provider collaboration on administrative rules, care management workflows and shared objectives.
- Consumers desire to know their PA status, yet the lack of streamlined and automated workflows between payers, providers and consumers leaves them uninformed.
- Payer and provider, each utilize IT systems to fix the problem, and industrywide transmission standards exist, but payer and provider CIOs have not optimized, integrated or fully utilized technology solutions to streamline PA processes. Additionally, allowed by the Health Insurance Portability and Accountability Act (HIPAA), fax is an inexpensive PA technology option used by both payers and providers.

User Recommendations

- Build a business case for technology investment in streamlining PA processes by quantifying mutual value gains for your payer organization as well as the providers you seek to contract with. Start by aligning investment to the highest-valued, most trusted provider organizations.
- Improve PA efficiency by making submissions and approvals electronic, interactive, and frictionless for payers, providers and consumers.
- Strive toward personalized and real-time PAs by implementing AI-enabled tools and clinical and benefit data integration at both payers and providers.
- Reinforce consumers' healthcare centrality by providing personalized access and navigation with PA and advocacy tools. By doing so, consumers are kept abreast of their approval status and can anticipate health and wellness needs along their care journey.

Sample Vendors

Casenet; Cohere Health; Infinx; Itiliti Health; Mphasis; Olive; Rhyme (formerly PriorAuthNow)

Gartner Recommended Reading

U.S. Healthcare Payers' Strategic Plan for Care Delivery Integration, Engagement and Experience

7 Ways Payer CIOs Can Grow Profits in Medicare Advantage, Managed Medicaid and Individual Exchange Markets

Industry Insights: U.S. Digital Consumer Engagement Tips From Financial Services

Consumer-Centric Health Products

Analysis By: Connie Salgy

Benefit Rating: Transformational

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Definition:

Consumer-centric health products focus on members' actual health improvement, and provide choice and flexibility through end-to-end personalized benefit plans and health and wellness solutions. Consumer-centric health products connect members to the broader healthcare ecosystem and utilize multiexperience modalities to encourage early and ongoing health and wellness engagement. They also provide care delivery options that resonate the most to the member whether digital, in person or at home.

Why This Is Important

Individual, employer and government purchasers increasingly put the responsibility on payers to deliver true member health improvement and citizen development. The goal is a preemptive, comprehensive and relevant set of member services, coverage benefits and supporting care programs that are linked and personalized at the member level. These create connections between lifestyle and health, prompting well-being opportunities, and encouraging proactive health and wellness engagement.

Business Impact

Consumer-centric health products and plan designs have the potential to shift the business models of today's payers into something more valued by customers and more profitable too. Earned trust and loyalty from members will enhance retention and reshape the health insurance industry. Traditional payers will move to the commodity end of the value chain. Consumer-centric value-adding organizations will occupy the premium end of that spectrum. The middle ground will not be sustainable.

Drivers

- New entrants are seeking to disintermediate payers by helping employers contract directly with providers, major retailers and other ecosystem service providers to deliver healthcare and related services.
- Digitalization is now implanted in the healthcare industry with payers and providers actively investing in the deployment of digital transformation projects, solutions and initiatives.
- Employers have been pressed to offer more comprehensive health and wellness solutions as their employees' have prioritized work-life balance over other employer-sponsored benefits in the wake of COVID-19.
- A Centers for Disease Control and Prevention (CDC) study reports that chronic conditions account for 90% of U.S. healthcare spending, yet many conditions can be better managed, delayed or avoided altogether with early, longer-term intervention.
- With the Transparency in Coverage final rule, payers see consumer price transparency as a new way of earning members' trust and repeat use, thereby increasing consumer-centric health value through improved care delivery steerage and customer retention.
- The Centers for Medicare and Medicaid Services (CMS) interoperability mandate gives payers an opportunity to enable members to better manage their health with access to clinical and administrative data.
- NPS scores and Medicare Advantage member/patient satisfaction Star ratings are heavily weighted on creating a frictionless care journey experience. It includes ease of use with health management tools, understanding care options, out-of-pocket expenses, and health and wellness opportunities, thereby supporting a consumer-centric product approach.

Obstacles

- Many payers continue to run on legacy infrastructure that is not equipped to support the immense rigors of today's modern payer space. They lack the agility to upgrade services and deliver new benefits due to hardcoded legacy IT systems.
- Legacy infrastructure is the result of legacy thinking that restricts payer organizations to innovate. For them, innovation initiatives have never-ending timelines, massive investments and an unjustifiable amount of risk.
- Many payers lack nimbleness in product and benefit configuration technology, prohibiting flexibility in administration and speed to market.
- Delivering consumer-centric health products is challenging for payers as common core system capabilities, including eligibility, care management, benefits administration, and health and wellness solutions, are often siloed and disconnected.
- Vendors address a diverse range of member health needs; however, there is no single service that will power your consumer health value products.

User Recommendations

- Take steps toward consumer-centric health-products by focusing on member engagement and personalization. Examples include ingesting data throughout the health ecosystem, accepting and monitoring self-reported member health data, and better integrating virtual and digital care technologies.
- Engineer a more digitalized, open and adaptive approach to technology deployment, as well as workflow, data, analytics and service collaboration with other organizations in the health ecosystem. It allows for personalization, and the development and management of multiple benefit, product and provider compositions.
- Test consumer-centric health products at scale by implementing pilot products to deliver, capture, report and promote the value it orchestrates. This kind of pilot can be tried parallel with longer lead time projects to modernize core systems.
- Continue your efforts by capturing the interplay of how quality, cost and member experience improvement help enhance member health status over time.

Sample Vendors

98point6; Bind; HealthWallet; Insightin Health; Jellyvision; mPulse Mobile; Optum; Pegasystems; Simplify Healthcare (eBenefitSync); TensileAI

Gartner Recommended Reading

How Payer CIOs Can Overcome Product Complexity Challenges to Grow New Revenue Streams

Industry Vision: Health Value Management, U.S. Healthcare Payers' Next-Generation Transformation Strategy

U.S. Healthcare Payer CIOs Improve Member Engagement in Health and Wellness Programs

U.S. Healthcare Payers CIOs Use Adaptable Digital Technology to Advance Self-Funded ASO Market Position

CIAM for Healthcare

Analysis By: Barry Runyon

Benefit Rating: High

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Definition:

Customer identity and access management (CIAM) for healthcare includes tools and technologies to identify, authenticate and authorize access to digital assets for consumers not known to the healthcare organization, and with no previous history. CIAM is necessary to secure public-facing applications that require users to enroll or register their identities and create accounts.

Why This Is Important

CIAM will continue to gain traction among healthcare providers along with their increased adoption of systems that offer convenient ways to engage consumers, customers and other constituents (e.g., family members, caregivers, contractors, affiliated clinicians) with whom they have no formal history. This includes systems such as patient self-scheduling, virtual care and remote workforce management.

Business Impact

The safety and security provided by CIAM for external use cases can positively affect:

- Digital experiences meant to attract and convert consumers into patients.
- Virtual care, experiential wayfinding and next-generation contact/call centers.
- Referral management, care coordination and community physician engagement initiatives.
- Remediation of gaps in identity governance and administration (IGA), identity and access management (IAM), and patient privacy monitoring (PPM).

Drivers

- There is an increasing need to conveniently and safely engage and service consumers who are not formally enrolled in the healthcare provider's IAM infrastructure.
- There is a need to engage consumers on their own terms and channels to begin the conversion from consumer to customer.
- There is a need to manage all digital identities (consumers, patients, employees, affiliates) to personalize individual preferences and experiences.
- Within the healthcare provider CIAM is being driven by increased interest and adoption of: self-service technologies; digital front-door solutions that streamline consumer access; next-generation contact and call centers; remote workforce collaboration and management solutions; and virtual care encounters and services.

Obstacles

- Lack of appreciation and understanding of CIAM value proposition by healthcare provider leadership and stakeholders.
- Traditional IGA and IAM software offerings can satisfy most consumer-facing requirements, but in an operationally siloed manner. They lack social media integration, profile and privacy management, and marketing analytics necessary to efficiently and conveniently engage consumers.
- Nascent CIAM platform support for the healthcare provider is vertical. Traditional IAM providers servicing the healthcare provider space have begun to extend their platforms to provide better support for the consumer and customer.

User Recommendations

- Generate CIAM interest by identifying compelling use cases that deliver customer experience benefits.
- Gain support of your chief information security officer (CISO) and compliance team by mutually exploring how CIAM can become part of the enterprise's identity and access management ecosystem.
- Increase your understanding of the CIAM market by investigating vendors that support the healthcare vertical. Begin with the representative vendor list in this research.
- Test the CIAM value proposition by establishing a limited scope pilot with clear expectations and success criteria.

Sample Vendors

ForgeRock; Imprivata; LoginRadius; Ping Identity

Gartner Recommended Reading

Innovation Insight for Customer Identity and Access Management

Invest Implications: Solution Comparison for Customer Identity and Access Management Capabilities of 7 Vendors

Precision Health

Analysis By: Sachin Dev

Benefit Rating: Transformational

Market Penetration: 1% to 5% of target audience

Maturity: Embryonic

Definition:

Precision health improves an individual's health by predicting the likelihood of future illness and recommending actions or interventions to promote health and disease prevention. It analyzes a wide range of data, including clinical, genetics, lifestyle, behaviors, biometrics, genomics and social determinants of health. Precision health employs technological advances in "omics" medicine and consumer data capture to identify individuals' optimal health pathway.

Why This Is Important

Early research has demonstrated precision health's potential for revolutionizing the health industry by identifying patient-specific health risks early on, leading to disease prevention. The strategic end goal of precision health is to create a healthcare system for wellness care, as opposed to sick care, by predicting early detection of illness or disease and preventing its progression using personalized treatment options.

Business Impact

Precision health breakthroughs will eventually disrupt the healthcare ecosystem and organizations' business models both operationally and technologically. The shift from curative to preventive care with precision health interventions will become the new gold standard in medicine. It will aim to prevent illnesses before they happen through wellness and prevention efforts — and ultimately increasing lifespans, decreasing the incidence of lifestyle diseases, and reducing chronic illness.

Drivers

- Precision health implies that the business model of today's healthcare organization, which relies on repair care episodes, needs to alleviate the skyrocketing care cost and revenue risk of relying on ill patients. Advancement in precision health promises to shift the care delivery from curative to preventive by monitoring individuals' health, identifying risks, and performing wellness and preventive interventions — radically changing the primary and secondary care as we know it today.
- With the advancements in machine learning (ML) and artificial intelligence (AI) capabilities, precision health can assemble and provide an aggregated view of patients' health, inclusive of all relevant clinical and demographic data points.
- With an influx of new regulations on interoperability globally, healthcare organizations can integrate, analyze and act on multiple datasets. These will enable direct connections to physicians, care workers, genetic counselors, and other professionals and patients.

Obstacles

- Although evidence is mounting, it will take years to develop the technologies required to capture precision health data elements, standardize their recording and analysis, and create evidence-based health pathways at scale. It will take even longer to develop AI-enabled insights from all the data required for each person.
- While advances in interoperability enable more collaborative approaches, current innovation networks are siloed with too much competition and not enough collaboration for precision medicine to succeed. It will take time to create public policy and develop reimbursement models that link the value of preventive interventions to successfully eliminating a condition that may occur over 50 years in the future.
- Precision health depends on patient behavioral changes that can be difficult to achieve.
- Precision health will continue to rise on the Innovation Trigger slope. However, we project it to be at least five to 10 years away from reaching the Plateau of Productivity.

User Recommendations

- Track the leading adoption indicators for precision health. These include decreases in the cost of sequencing and companion testing, reductions in the cost of treatment, and increasing rates of reimbursement for treatment.
- Find opportunities to leverage developing organizational competence in responding to genomic and biomarker analysis and consumer engagement to amass the data and analytics capabilities required for precision health initiatives.
- Keep precision health concepts on your growth strategy and roadmap as they establish population health management and invest in precision medicine platforms. Take the long view in capturing more data than less, positioning the organization for its use in research or AI-driven initiatives to see precision health business opportunities.

Sample Vendors

2bPrecise; DNAnexus; Molecular You; Orion Health; Precision Digital Health

Gartner Recommended Reading

Population Health Management Framework for Healthcare Provider CIOs

Innovation Insight for Digital Health Platform

Integrated Member Retail Experiences

Analysis By: Kate McCarthy

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Emerging

Definition:

An integrated retail experience is a payer business strategy using personal interactions enabled by technology tools across platforms and in collaboration with outside entities to provide members with medical and behavioral healthcare, retail products, health advice, and customer service. Integrated retail experiences aim to add health value by establishing trust, deepening member relationships and creating member loyalty.

Why This Is Important

Healthcare is diversifying from conventional services and settings to increasingly fragmented and specialized care delivery, personalized medicines, consumer health technology products, community-based programs and preventive health resources. Care delivered by retailers and virtual care, either in partnership with an existing retailer or using a payer's own resources in a community setting, will allow payers to help members achieve positive health outcomes and perceive comprehensive value.

Business Impact

Retail will be one of the many tools at your disposal to activate members and improve quality by:

- Meeting members when and where they need services the most, and empowering them to choose the physician, retail, virtual or phone services right for them.
- Coordinating with in-person, virtual care and remote care management to provide members with services in the touchpoints and settings they prefer to remain competitive.

Drivers

- Member engagement is perennially ranked as a high priority in the 2021 Gartner CIO Survey. Yet, common approaches like phone-based care management and text appointment reminders cannot achieve breakthrough increases in risk score, quality measures, population health or member relevance.
- Desire to improve member engagement and satisfaction has catalyzed payers to make member service and care management staff available both in the community and virtually where they are the most convenient to members. Teams working outside a payer's walls will, however, also require new staffing models and mobile tools.
- As Amazon, CVS Health, Walmart and others extend retail and digital health services and insurance across the U.S., recognition of shifting competitive paradigms has driven retail, virtual and healthcare integration. Moves like CVS Health's growth of its HealthHUB and virtual care offering, and examples of experience-focused locations, like Humana's neighborhood centers, have changed the payers' calculus.
- Payers are now interested in ways to reach members, provide them with proactive health advice and address social determinants of health. For example, a payer may already host health and wellness content on its member portal. The member's experience of accessing the portal for information on healthy foods is, however, completely different from an interaction with a payer's nutritionist who tailors recommendations to the member's specific needs based on clinical, social, administrative and consumer data.
- Today's primary touchpoints of engagement are limited in their ability to engage members. Using multiple communications touchpoints across integrated retail experiences allows payers to extend member engagement efforts beyond mailings, phone calls, portals and apps, and improve member adoption of payers' digital tools and services through a combined in-person and online experience.

Obstacles

- Though payers are advancing member outreach programs, competitors are rapidly launching new options. For example, Walmart and CVS Health continue to deploy low-cost medical clinics in their stores, and Amazon has added virtual care on Alexa in partnership with Teladoc Health to its growing portfolio of healthcare capabilities.
- Few payers have integrated retail experiences that combine technology tools across platforms and incorporate community resources today.
- Payers that launched brick-and-mortar locations in anticipation of Affordable Care Act individual plan sales struggled to realize financial and member service gains from retail spaces focused on sales alone.
- We advance use of this hybrid of strategy and technology only slightly in 2022 to near the Innovation Trigger and five to 10 years away from mainstream adoption.

User Recommendations

- Track retail industry trends and technologies. Payer CIOs cannot spearhead a retail strategy on their own. Establishing a retail offering is boundary-spanning work that will challenge finance and care management peers' preconceived notions of profitability and member engagement. Yet, retail plays a key role in payers' transformation by demonstrating their organization's value to members in a fundamentally different way.
- Brainstorm and assess potential partnerships with existing retailers, care delivery organizations with in-person locations, advocacy organizations and community gathering places.
- Propose to your executive peers a pilot program with established success criteria that sparks the next step into eventual full deployment.
- Invest in technologies like multiexperience development platforms (MXDP) and CRM to support member-centric service orchestration across multiple entities operating in the broad healthcare ecosystem.

Sample Vendors

Amazon; Best Buy; CVS Health; Walgreens; Walmart

Gartner Recommended Reading

Healthcare and Life Science Business Driver: Total Experience Transformation

How Digital Giants and Big-Box Retailers Are Advancing Consumer-Centricity and Virtual Healthcare

Healthcare CIOs Must Turn Retailers' Care Delivery From Liability to Asset

Innovation Insight for Consumer Experiences in Healthcare and Life Sciences

At the Peak

Provider/Partner Network Management Platforms

Analysis By: Kate McCarthy

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Provider/partner network management platforms are the technology tools and services associated with managing the relationships and interactions between payers, providers and other partners in delivering health value to members. These solutions integrate the data sharing, workflows and contractual obligations necessary to support the full life cycle of provider relationships, from network design and onboarding to claims payment, servicing and contract renewal.

Why This Is Important

In an era of increased emphasis on care coordination and value-based networks, mutually beneficial payer and provider relationships are essential for both parties' success. Provider/partner network management platforms unify contracting, credentialing and data loading onto one system. This "provider data source of truth" feeds data to, and receives information from, all interactions that a payer has with its network of providers and community-based partners.

Business Impact

Payers have a palpable need to bring products defined by network composition to purchasers, while providers need more comprehensive, ongoing relationships with their patients. Thus, IT systems that help support those relationships play a strong role in payers' and providers' digital transformation efforts. The payoff for improving provider interaction applications is lower operating costs by eliminating duplicate entry processes and rework cycles, and improved member and provider relationships.

Drivers

- Payer CEOs and boards of directors realize that their provider relationships are a strategic asset, and that the member service and regulatory risks of poor provider data accuracy (such as fines in Medicare Advantage) are growing.

- Legacy provider network management point solutions that help payers contract, credential and load providers for claims payment suffer from a lack of integration, inconsistent data formats and poor usability. The result is data gaps, error-prone provider directories, inaccurate claims payment, costly rework cycles and poor member service.
- The applications and operations that payer business teams have used for provider network management are mostly piecemeal and simply not up to this task. Furthermore, the rework that results from the use of piecemeal systems incurs a significant cost to payers and providers alike.
- Payer business leaders demand outcomes from provider/partner network management platforms. Examples include improved provider data accuracy and consistency, reduced friction in the provider and member experience for improved consumer satisfaction, and smoothed relationships with the providers that payers depend on for health value delivery. In addition, payers can see better financial results, such as improved claims payment, improved financial reconciliation and audits with providers, and reduced risk of state and federal regulatory penalties for poor provider directory data quality. Payers can also obtain access to advanced analytics on providers' clinical quality and value-based payment relationship performance, increased visibility into network performance, and coordinated provider and member journeys.

Obstacles

- CIOs prioritize member-facing IT applications. So, CIOs do not make a connection with the effect that poor provider data has on claims accuracy and timeliness, which negatively impact member and provider experience.
- IT and business leaders fail to gain buy-in from the provider contracting, provider operations, IT configuration and credentialing teams on moving to a common platform and single source of truth.
- Traditional provider network management solutions struggle to improve the payer or provider experience and often create data silos that lead to dysfunctional workflows and insufficient insight.
- Payers seeking provider network management solutions are increasingly looking for solutions that can manage various stakeholder relationships, such as member and employer relationships. Investment in this space is shifting to CRM-based solutions with RFIs for multiple use cases and functionality needs. As a result, this technology remains at the Peak of Inflated Expectations.

User Recommendations

- Take a total experience view of relationships, and consider solutions that enable engagement for multiple stakeholders, such as providers, members and employers.
- Prioritize investment in solutions to manage the increasing complexity of provider network relationships under value-based payment arrangements, as well as the increasing burden of provider data regulation.
- Modernize fragmented legacy applications and operational practices to address integration challenges. Follow the digital health platform approach to address the operational challenges of provider data and enable improved relationships.
- Obtain support from business sponsors of legacy IT systems by assessing the costs of and risks arising from current practices.
- Work with IT leaders to create migration plans that enable real-time integration to care management, quality improvement, risk adjustment optimization and core administrative processing systems. This will help realize ROI from systems.

Sample Vendors

Aperture Health; Change Healthcare; Cognizant; Infosys; Newgen; Pegasystems; Salesforce; Santéch; Virtusa; Zipari

Gartner Recommended Reading

Transform Healthcare Provider Relationships With Provider/Partner Alignment Maturity Model for Payer CIOs

U.S. Healthcare Payer CIOs Must Match Digital Platform Models to Their Local Provider Engagement Strategy

U.S. Healthcare Payer CIOs: Achieve Provider Engagement Through Data, Analytics and CRM

Hyperautomation for Healthcare Payers

Analysis By: Mandi Bishop

Benefit Rating: Transformational

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Hyperautomation involves the orchestrated use of multiple technologies, tools or platforms to rapidly identify, vet and automate as many business and IT processes as possible. Examples of these include artificial intelligence (AI), machine learning (ML), event-driven software architecture, robotic process automation (RPA), BPM/iBPMS, integration platform as a service (iPaaS), low-code or no-code tools, packaged software and other types of decision, process and task automation tools.

Why This Is Important

Straightforward and mature solutions, such as RPA and BPM tools, automate low-skill, highly repetitive, stable, rule-based tasks that originate with structured data and do not require human judgment. Hyperautomation builds on that foundation with learning capabilities to orchestrate complex decision processing in high-skill tasks via repeatable execution patterns using unstructured and structured data. It is critical to advance ecosystemwide workflow integration and sustain a hybrid workforce.

Business Impact

Hyperautomation tools provide integrated solutions to support complex decision processing, improve total experience and add agility to the organization's processes. They accelerate processes such as prior authorization, reduce error rates and drive down process costs with the goal to improve customer satisfaction and achieve a significant immediate ROI. They enable payers to make better use of their data to drive actions and automate/augment processes, taking over more decision-based tasks.

Drivers

- According to Gartner's 2022 CIO and Technology Executives Survey, payers lag their cross-industry peers by more than two years in implementing digital processes. Twenty-five percent of payer respondents report automation as a top-five priority, with 19% indicating that hyperautomation will receive the largest amount of new or additional funding.
- The combination of AI-driven decision-making and orchestration capabilities with automation technologies is an accelerator to optimizing and transforming processes throughout the enterprise. This will assist payers in achieving efficiency and cost optimization goals while accelerating the shift from labor arbitrage to technology arbitrage.
- The hyperautomation vendor market continues to mature on pace with AI technology maturation. Vendors that originated in RPA, BPM and low-code application platforms (LCAPs) as well as new startups and technology giants are procuring, building and enhancing their offerings.
- Hyperautomation solution capabilities have accelerated due to consolidation among existing players and acquisition and entry by larger IT companies. This has led to an extension in vendors' portfolios of software offerings to incorporate wider technologies coupled with ML and other AI technologies.
- System integrators are also presenting solutions through partnerships with various vendors, offering an integrated set of tools and implementation capabilities.
- Hyperautomation solutions are rapidly proliferating, advancing this innovation profile quickly past the Peak of Inflated Expectations. Gartner expects mainstream adoption within five years.

Obstacles

- Forward-thinking organizations reengineering and rethinking their operational processes are embracing hyperautomation solutions — but the governance around these initiatives is still immature.
- Most payers have not yet comprehensively reviewed their organizations' processes for hyperautomation suitability, or even for automation use case opportunities more generally.
- Radical process change will not happen in the short term, as payers remain risk-averse and focused on achieving shorter-term efficiency targets using more limited but mainstream technologies such as RPA.

User Recommendations

- Get started by identifying a specific and persistent challenge, such as extracting a qualifying event change request from a member email and automating the workflow execution. Initially avoid complex use cases with a myriad of stakeholders, as this may trigger governance roadblocks.
- Evaluate use cases for process reengineering before automation. Do not automate faulty processes.
- Establish success criteria and KPIs by enlisting data scientists and engineers (internal or external) as well as business leaders to develop outcome targets.
- Select vendors that approach hyperautomation with business acumen in your domain and specific use cases rather than taking a purely technical approach. Each use case may require a different solution — hyperautomation is not a one-size-fits-all approach.
- Do not underestimate the importance of change management. Adopt best practices to address cultural barriers to hyperautomation acceptance.

Sample Vendors

Appian; Automation Anywhere; Blue Prism; Hyland; Olive; SS&C Technologies; Pegasystems; UiPath; WorkFusion

Gartner Recommended Reading

Automation Mixology: When to Use RPA, AI and BPM for U.S. Healthcare Payers

Strategic Automation Decision Framework: From RPA to AI on the Journey to Hyperautomation in Healthcare

Scale Automation in Healthcare Using a Center of Excellence

Top 10 Strategic Technology Trends for 2020: Hyperautomation

API Management in Healthcare

Analysis By: Gregg Pessin

Benefit Rating: Moderate

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Application programming interface (API) management includes IT tools and platforms for the creation, provisioning, monitoring and maintenance of APIs. Comprehensive API management includes the entire API life cycle. The increased adoption of HL7 Fast Healthcare Interoperability Resources (FHIR) and the emergence of interoperable application ecosystems have made API management an increasingly important IT capability and an indicator of real-time health system maturity.

Why This Is Important

Globally, mobile apps, modern web architectures, digital strategies, IoT and web APIs have made APIs an essential interoperability component of any digital transformation strategy. In the U.S., APIs are on the leading edge of healthcare's digital transformation and are the centerpiece of the healthcare industry's recently finalized interoperability rules. Successful APIs will have many active consumers and must be secured, monitored, maintained and managed throughout their life cycle.

Business Impact

API management is vital to healthcare APIs' governance, integrity, and performance. APIs extend the reach and capabilities of legacy healthcare provider clinical and business systems beyond their original product roadmaps. Managing those APIs throughout their life cycle is required by HDOs to ensure their application solution sets deliver value continuously. API management is vital for HDO participation in interoperable application ecosystems and digital transformation initiatives.

Drivers

- While APIs and service-oriented principles have been around for some time, they continue to gain acceptance and traction in the vendor-dominated healthcare provider space. Healthcare organizations require more timely responses to their business and digital transformation requirements than the healthcare software vendor community can accommodate through release cycles and product roadmaps.
- The adoption of API management has increased from last year as the pace of healthcare provider business and clinical information sharing requirements increases, along with strategic digital transformation initiatives facilitated by interoperability advances. The introduction of composable application architecture is accelerating interest in API management.
- In the U.S., patient access and interoperability requirements codified by ONC and CMS interoperability rules are driving API management adoption. These rules require open APIs for healthcare data access and exchange.
- Healthcare organizations have begun to expect proprietary and open APIs from their vendor community that can be safely consumed and orchestrated to support new data requirements, workflows and business capabilities. They are looking to exchange data, share work and move beyond conventional messaging interfaces and siloed workflows.

Obstacles

- Many API management solutions are being marketed to the healthcare industry by new vendors. This may result in solutions that will not easily accommodate traditional healthcare workflows, use cases, and information exchange patterns.
- Some solutions are only available as cloud-only, which may be a limiting factor for healthcare because most of the industry still deploys most of its IT solutions on-premises.
- The pricing and subscription models of the various API management platform vendors may also be at odds with the high data transaction volumes of typical healthcare provider integration and data exchange workflows.

User Recommendations

- Implement an API management program to streamline the delivery of new business capabilities, extend existing applications and systems such as the EHR, and enable mobile and other multichannel clients.
- Employ opportunities within interoperable application ecosystems such as clinical communication and collaboration platforms to expose data and functionality through API management.
- Leverage API management technologies to help you build, consume, operate, secure, and manage self-developed APIs and FHIR resources. Use API management platforms to centralize authentication and authorization for your APIs.
- Source your API management capabilities from purpose-built API management, clinical data interchange platforms, and your existing interfacing/integration platform.
- Employ APIs when conventional industry interoperability messaging standards fall short of your health information and workflow needs.

Sample Vendors

Apigee; Axway; Boomi; Microsoft; MuleSoft; TIBCO Software

Gartner Recommended Reading

Magic Quadrant for Full Life Cycle API Management

7 Critical Domains of a Successful Healthcare Provider Interoperability Strategy

Establish Interoperable Application Ecosystems Early in Your Composable Healthcare Provider Roadmap

Blockchain for Healthcare

Analysis By: Gregg Pessin

Benefit Rating: Transformational

Market Penetration: Less than 1% of target audience

Maturity: Adolescent

Definition:

A blockchain is an expanding list of cryptographically signed, irrevocable transactional records shared by all participants in a network (e.g., consumers, providers and payers). Each record contains a time stamp and links to previous transactions. A blockchain is an example of distributed ledger technology. In healthcare, blockchain has the potential to facilitate the secure exchange of health information.

Why This Is Important

Blockchain and distributed ledger concepts hold the promise of transforming both healthcare architectures and operating models. The potential of this technology to radically transform economic interactions could impact the health value chain, regulators, suppliers and consumers. This potential has the attention of our healthcare clients, but blockchain adoption in healthcare is very slow compared to other industries.

Business Impact

- Blockchain can enable efficiency when reaching new customers, extending relationships with supply chain partners and offering better quality and more complete linkages between events and data.
- Blockchain has the potential to expand the boundaries of healthcare by connecting industry systems of record directly to end users without the burden of centralized control.

Drivers

- Leading enterprises are starting to realize that blockchain can address multiple problems that other technologies cannot, such as auditability; oversight and management of public fund distribution; delivery and use of healthcare incentives to change public action; and decentralized identity management for contact tracing.
- During the pandemic, a blockchain-based consumer mediated vaccination verification solution performed well at scale (see Blockchain Technology, a Practical Solution to Vaccine Verification Systems).
- Today, breakthroughs are few, with enterprise pilots concentrated on blockchain-inspired or distributed ledger technology (DLT) solutions.
- For the most part, market adoption has halted recently as the industry continues to explore how blockchain can support business process efficiency improvements.

- The focus on credentialing, document management and supply chain is being pursued by a few enterprise initiatives or through consortia such as the Synaptic Health Alliance and Hashed Health.

Obstacles

- Regardless of the technical challenges that need to be overcome, many CIOs are realizing that standard distributed database-style projects are doing little to sufficiently boost returns.
- Some vendors have diluted their blockchain-labeled DLT messaging and are concentrating more on value delivery including digital transformation, Internet of Things (IoT) and artificial intelligence (AI). The immaturity of the technologies underlying blockchain prevents adequate scale, security and usability with enterprise levels of performance and security.
- The transformative nature of blockchain at a process, operating and business model level (decentralization and tokenization) implies the need to break and remold decades-old healthcare industry processes, relationships, systems and structures.
- Scaling private architectures to support production-level blockchain initiatives proves difficult and expensive.

User Recommendations

- Track blockchain's market readiness in healthcare and factor these trajectories into your strategic plans and investment timing. The most transformative and impactful applications will be oriented to ecosystem services with multiple organizations involved, and they will take longer to evolve.
- Differentiate the kinds of blockchain technology providers and disruptors by establishing a map of solution providers in your healthcare industry sector.
- Use Gartner's criteria for identifying opportunities and apply the decision framework to determine the blockchain technology approach.
- Experiment with innovative trials using blockchain and be ready for setbacks as additional use cases emerge and the technology continues to evolve.

Gartner Recommended Reading

Understanding the Gartner Blockchain Spectrum and the Evolution of Technology Solutions

Quick Answer: What Is Blockchain?

Top Five Reasons CIOs Should Care About Blockchain

Guidance for Blockchain Solution Adoption

Health Data Curation and Enrichment

Analysis By: Jeff Cribbs

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Emerging

Definition:

Healthcare data curation and enrichment represents the processes and technologies that add value to data gathered from across the consumer/citizen/patient health and wellness continuum. These technologies and processes apply cleansing, normalization and other enrichment services (such as episode grouping, predictive model scoring or outcome labeling) to maximize value in downstream consumption and use and facilitate agile data governance.

Why This Is Important

At a time when data sources in healthcare are expanding rapidly and advanced analytic techniques (like AI) are entering mainstream use, many healthcare organizations struggle with the basics of data quality and governance. Data curation and enrichment capabilities are becoming critical elements of advanced analytics architecture to derive value from new data sources, improve and automate data quality, and enable more sophisticated and pervasive use of data.

Business Impact

Successful deployment of a comprehensive health data curation and enrichment capability is a foundational component of the real-time health system, conducting digital healthcare, and the ability to execute population health and community-based care. When data curation and enrichment tools are well deployed, they can significantly reduce the total cost and risk of data management and the incremental cost of connecting to new data sources.

Drivers

- New regulatory requirements from national eHealth initiatives and local government initiatives to share data more effectively in serving a common set of citizens across the traditional boundaries of health and social care.
- A growing number of healthcare “data strategy” initiatives, with significant funding, which focus on deeper data management capabilities such as data quality and enrichment (as opposed to implementing new digital health applications or operational tools).
- Increasing use and maturity of data standards (such as Fast Healthcare Interoperability Resources [FHIR] and Observational Medical Outcomes Partnership [OMOP]) in analytic environments.
- The scarcity of talent, especially in data engineering and data science which has driven a search for more automated ways to support analytics environments.
- The integration of analytics technology and operational technology architecture which has created the requirement for a combined approach to curation and enrichment for these traditionally separated processes. In this way, data curation and enrichment is a key capability on the path to more comprehensive data fabric architecture.
- We have advanced this profile forward beyond the peak in 2022, largely in line with signals from payers and providers indicating increased focus on enterprise data management.

Obstacles

- Creating a coherent solution architecture for data curation and enrichment is complicated. Many data enrichment and curation hub technology and service providers either offer a broad platform across the data enterprise life cycle, or offer capabilities narrowly targeted on a particular data source (like EHR-originating data), enrichment type or functional domain (like care quality improvement).
- Many technology and service providers in this solution space promise “out of the box adapters” for various data sources. However, end user and vendor feedback suggests there remains substantial custom integration work performed in the background of most implementations.
- Problems with data curation and enrichment are often several layers of technology behind the problem a clinical or business user is actually experiencing. Making the case for additional investment in the core capability can be challenging for healthcare technology leaders.

User Recommendations

- Proactively assess what the data integration demands across the healthcare organization will be over the next three to five years. Cull insight from the organization’s strategic plan and through other deliberate short-term and midterm visioning exercises. Determine if today’s data integration strategies will be sufficient in three years.
- Create requirements by mapping out the patient, provider and administrative journeys, and document the ideal movement of data across the enterprise. Update the enterprise and information architectures to reflect the future state. Develop your five-year roadmap.
- Prepare the business for the likelihood of a multivendor, build-and-buy, insource-and-outsource solution for enterprise data curation and enrichment needs. This is particularly true in organizations where business leadership may expect an incumbent megavendor or a new partnership with a digital giant to address all requirements. This is unlikely in the near term and midterm.

Sample Vendors

Alteryx; DataMotion; Diameter Health; DXC Technology; IMAT Solutions; Informatica; Medical Informatics; Validic; Verinovum

Gartner Recommended Reading

Drive a New Data and Analytics Architecture to Match Your Digital Healthcare Provider Needs

Emerging Technologies: Critical Insights on Data Fabric

Sliding into the Trough

Community Resource Network Management

Analysis By: Mandi Bishop

Benefit Rating: Transformational

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Community resource network management (CRNM) is an operational model that an entity (typically a payer, provider or government agency) adopts to optimize the utilization of nonmedical services and ameliorate the effects of social determinants on health status and outcomes. CRNM components include analytics, integrated workflows, service provider directories, referrals management and outcomes measurement.

Why This Is Important

While most healthcare organizations have active health equity-focused initiatives addressing social determinants of health (SDOH), most are limited in their scope and focus on a certain subpopulation or a single nonmedical determinant, such as food insecurity. Organizations have struggled to succeed at an enterprise scale that encompasses the totality of needs. CRNM combines individual initiatives and integrates data and workflows across constituencies to address these needs at scale.

Business Impact

CRNM has transformative benefit potential. Payers, providers and consortiums are investing in CRNM at an unprecedented pace, with many reporting positive outcomes. For instance, the Finland Family Center Model's multidisciplinary approach for preventive rather than curative services reduced the rate of corrective family work episodes cost-effectively. UnitedHealth Group's Health Equity Services Program significantly reduced postpartum care disparities for Black women in Ohio and Michigan.

Drivers

- The shift to value-based care continues, creating incentives to address nonmedical needs.

- SDOH represents 60% or more of the contributors to health outcomes and, by extension, medical costs. Healthcare organizations are under enormous pressure to control medical costs and are looking to implement and scale CRNM to reap the rewards of its transformational business and health benefit potential.
- The pandemic exposed the extent of health inequities due to SDOH, underscoring the significance of SDOH to population health. For example, a March 2022 study by the international poverty research organization — Oxfam, uses excess death estimates as its basis reports that the COVID-19 mortality rate is four times higher for low-income countries than in rich ones. Women and children in low-income countries were disproportionately affected. On a per capita basis, deaths in low and lower-middle-income countries are 31% higher than in high-income countries.
- Hunger has serious long-term physical and mental health effects, and the pandemic has dramatically increased the population at risk. According to the Food and Agriculture Organization of the United Nations, up to 811 million people worldwide faced hunger in 2020. Nearly one in three people in the world did not have access to adequate food.
- This global moment creates an opportunity for innovators to get in front of the overwhelming and growing nonmedical needs by establishing community service provider networks and funding mechanisms to sustain them.
- As executive support for and commitments to health equity and CRNM continue to increase, the investment will accelerate.

Obstacles

- There is not yet a proven business model for operating CRNM at scale across regions. Although it is integral for advancing population health outcomes and value-based care, sustainable funding to implement and maintain community resource networks and ensure service fulfillment is still elusive.
- Consumers will be alarmed by new processes and data sharing used to address leading determinants of health.
- Social service agencies are complaining of duplicative efforts to digitize community resource directories and referral processes. The “medicalization” of certain social services could make those services more expensive overall, especially in the U.S.

- Although accelerating investment will lead to vendor capability and process maturation, the lack of best practice examples and standards for interoperable data exchange will remain barriers to scale. Thus, we are advancing the CRNM profile toward the Trough of Disillusionment and expect it to achieve mainstream adoption within 10 years.

User Recommendations

- Drive the urgency of improving coordination with community resources by promoting CRNM with your population health and consumer experience peers. Invoke analogies from established, core competency “referral networks” or from “provider network management.”
- Establish the business value of CRNM for your organization. Assign a business analyst to document the current state of community resource network integration within your organization. Identify use cases, user stories, pain points and opportunities for improved technical support.
- Form a cross-functional team of population health management leaders and IT partners from your organization and hold product demonstrations with at least one of the CRNM vendors included in this profile.

Sample Vendors

Arcadia; Cedar Gate; Cityblock; Findhelp; HealthCrowd; Health Leads; Papa; Signify Health; Unite Us; WellSky

Gartner Recommended Reading

Innovation Insight for Advancing Population Health With Community Resource Network Management

How Healthcare CIOs Can Enable Integrated Health and Social Care Pathways

Use Social Determinants of Health Analytics to Inform Health Equity Strategy

Healthcare Payer CIOs: Prepare for the Next Generation of Care Management

Digital Health Navigator

Analysis By: Kate McCarthy

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Digital health navigators integrate and orchestrate data and workflows across disparate functions, such as health and wellness programs, medical shopping, digital condition management, and virtual care, to deliver high-value member interactions. This profile tracks the technologies that support a concierge model, as well as the extent to which payers are deploying this capability to their membership.

Why This Is Important

In contrast with traditional human-resource-intensive service models, digital health navigators help scale care management and increase the value delivered to purchasers from their healthcare insurance spending. These solutions orchestrate member experience across the ecosystem, addressing administrative tasks, along with health needs. This is a level of service and convenience that purchasers — employers, individuals and government agencies alike — increasingly expect.

Business Impact

Business impacts include:

- Lower claims expense: Independent studies from organizations like Aon and vendor case studies report significant savings in annual cost per member.
- Higher Net Promoter Score (NPS): Most vendors tout an NPS 40 points or more above the health insurance industry average.
- Higher purchaser account retention and better competitive position: As a result, digital health navigator offerings are becoming the norm, rather than the exception.

Drivers

- Higher purchaser expectations and competition for service continue to fuel rapid growth for the healthcare engagement services industry. Payers are in a prime position to deliver these solutions, given their proximity to members and grasp of provider and plan data. In addition, myriad partnership opportunities are available to fill functional gaps, such as digital chronic condition management.
- Payers are maturing online symptom checkers and triage tools to facilitate next best actions, such as scheduling a provider virtual visit or contacting public health agencies. Purchasers increasingly expect more from all their business interactions. Eventually, “concierge service” will become synonymous with “service.” Digital health navigators will become a natural extension of the clinical and administrative processes that payers manage today.
- The integration opportunities to enrich the value of these services continue to multiply, along with the complexity of the services offered, and the line continues to blur between engagement, administration and care management.
- Given the investment activity and revenue growth of independent solutions, the rapid deployment of digital health navigator capabilities, we continue to advance this profile beyond the Peak of Inflated Expectations. We believe these solutions will achieve mainstream adoption in two to five years.

Obstacles

- Payers lag in digital platform adoption, inhibiting their ability to source capabilities from niche partners across the ecosystem and compose an optimal member experience.
- Most organizations still have information and process silos that limit real-time orchestration across their internal, let alone external, domains that interoperability regulation will not solve.
- Payers face fierce competition from nimbler companies and startups built on a culture of customer centricity that doesn’t carry a heavy burden of legacy business models and technical debt.

User Recommendations

- Determine whether your organization's ambition is to develop its own internally managed digital health navigator offering, or to establish strategic partnerships with vendors to streamline account onboarding and improve service. Assess your readiness to deliver concierge services spanning administrative and clinical functions. Identify gaps that strategic partners could fill, temporarily or otherwise.

- Identify and evaluate digital health navigator solutions that your employer accounts currently use as examples to emulate or cultivate as partners. Look for functional and technical capabilities that align to your organization's digital health navigator strategy. Develop a best-of-breed approach to deliver a cohesive, fully integrated offering.

- Go beyond employer group arrangements, and brainstorm digital health navigator deployment plans for each line of business, including Medicare Advantage and managed Medicaid.

Sample Vendors

Accolade; Alight Solutions; b.well; Castlight Health; Collective Health; HealthJoy; Journi, a Cambia Health Solutions company; Virgin Pulse; Zest Health

Gartner Recommended Reading

Healthcare Payers Must Provide Concierge Consumer Engagement Services to Win Back Member Relationships

U.S. Healthcare Payer CIOs Must Invest in 2022 Gartner Top Strategic Technology Trend — Total Experience

Top Tech Trend: Total Experience for U.S. Healthcare Payers

Innovation Insight for Consumer Experiences in Healthcare and Life Sciences

Consumer Journey Analytics in Healthcare

Analysis By: Kate McCarthy

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Consumer journey analytics is the process of building a complete understanding of a healthcare and life science consumer's journey, and using analytics to optimize the value of that journey. Consumer journey analytics collects data by tracking and analyzing the way consumers interact with their health and wellness over time.

Why This Is Important

Healthcare and life science organizations continue to accelerate the use of digital touchpoints for consumer engagement. These member, patient, provider and trial participant journeys yield vast amounts of information that can construct and analyze the consumer's experience. Consumer journey analytics enable healthcare and life science CIOs to analyze and optimize consumer experiences across engagement touchpoints.

Business Impact

Healthcare and life science organizations stand to benefit from customer journey analytics due to:

- Higher customer satisfaction from seamless, personalized interactions across touchpoints
- Increased visibility into consumer interactions
- Better allocation of investment in functionality and capabilities for each engagement touchpoint
- Refined consumer segments that increase the effectiveness of campaigns
- Improved data-driven personalization that gives a more complete view of the consumer

Drivers

- Consumer journey analytics is an essential tool for optimizing and personalizing healthcare and life science consumer journeys. Leading healthcare and life science organizations are increasingly using it to improve the attraction, conversion and activation of members, patients, providers and clinical-trial participants.
- In recent years, several tools and techniques for assessing and reimagining consumer experiences have gained significant adoption in healthcare. These include persona development, voice of the customer applications and journey mapping. The output of these efforts among leading organizations has helped foster an enterprise understanding of both the current and the target state vision of consumer experience.
- Consumer journey analytics yield valuable insights into a healthcare and life science consumer's needs and preferences. This enables the identification of the next best action for the consumer and the appropriate nudge to encourage the consumer to take this action through analysis of data collected from engagement touchpoints. These touchpoints include human interaction (call centers, care manager, provider encounters), digital (websites, mobile, voice, wearables), assisted help (live chat and cobrowsing) and virtual care.
- In addition, healthcare and life science organizations can obtain: (1) increased revenue streams tied directly to satisfaction measures (e.g., CAHPS), medical risk (e.g., risk adjustment) and channel utilization (e.g., patient portal adoption); (2) a better understanding of how improvement in experience relates to improved clinical and financial outcome; and (3) a direct line of sight into how the following are either supporting or preventing the ideal customer journeys — business partners within the sector (e.g., physician to physician), business partners across sectors (e.g., retail clinics and payers providers) and business partners across industries.

Obstacles

- Healthcare and life sciences lag other industries in their use of consumer journey analytics. Comparable benefits are available to the industry; however, the complexity of healthcare and life science journeys, continued dependence on face-to-face interactions, and the vast amount of data required remain barriers to widespread use and adoption.
- Healthcare and life science IT business leaders fail to use the minimum necessary touchpoints to build complete consumer analytics.
- Healthcare and life science organizations are overly reliant on today's legacy systems, such as electronic health records (EHRs) and core administration platforms. These technologies slow down progress in advancing both touchpoints and consumer journey work. As a result, this year, this Innovation Profile advanced further into the Trough of Disillusionment with two to five years before reaching maturity.

User Recommendations

- Adopt a total experience approach to address the insights employees need to support diverse healthcare and life sciences consumers.
- Prioritize projects that gather and analyze consumer journey data within new digital products and services.
- Examine opportunities to implement consumer journey analytics as a part of digital projects that transition call volumes from a call center.
- Use agile analytics approaches to quickly pilot consumer journey analytics for important personas. This will give business and IT leaders a sense of what is possible, and will guide investments in capabilities.
- Use consumer journey analytics to build a longitudinal understanding of consumer experience that includes encounters with other enterprises (e.g., external specialists); interactions with healthcare industry sectors (e.g., out-of-pocket costs for a procedure, life science patient support programs); employers (e.g., wellness incentives); social media; and consumer wearables.

Sample Vendors

[24]7.ai; Adobe; Clarabridge; Ignite Tech (BryterCX); Mercury Healthcare; Salesforce; SAP; Teradata; Virgin Pulse (Welltok)

Gartner Recommended Reading

Market Guide for Customer Journey Analytics

Quick Answer: How Can D&A Leaders Use CX Analytics to Build Empathy Across the Customer Journey?

Innovation Insight for Consumer Experiences in Healthcare and Life Sciences

Healthcare and Life Science Business Driver: Total Experience Transformation

Healthcare Payer APIs

Analysis By: Mandi Bishop

Benefit Rating: Transformational

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

APIs enable real-time interoperability among internal and external ecosystems, and are a hallmark of composable architecture. APIs like Fast Healthcare Interoperability Resources (FHIR) provide timeliness and agility in clinical and administrative systems, and process integration.

Why This Is Important

APIs are on the leading edge of healthcare's digital transformation. Interoperability rules from the Office of the National Coordinator for Health Information Technology (ONC) and the Centers for Medicare & Medicaid Services (CMS) make APIs critical to the payer industry. Mobile apps, modern web architectures, digital strategies, IoT, and the ubiquity of web APIs provided by cloud service providers and leading enterprises have made APIs a must-have component of any integration architecture.

Business Impact

APIs are extending the value and reach of expensive and critical business systems beyond the limits of their individual capabilities into integrated, comprehensive solutions for more complex payer workflows and problems. They provide the timeliness and agility required for organizations to transform into a composable enterprise supported by a real-time health ecosystem, and usher in a new era of consumer-mediated data exchange.

Drivers

- Purchasers, providers and partners alike now assume that APIs and complementary consent, identity and access management capabilities are core organizational competencies driven largely by new interoperability-focused legislation and compliance requirements. APIs are the integral connecting fabric among digital platforms and their associated ecosystems.
- While APIs and service-oriented principles have been around for some time, they are rapidly becoming pervasive and are thereby central to payers' consumer value proposition. As a key example, the CMS Interoperability and Patient Access Final Rule requires that payers share members' health data via standard FHIR APIs and allow members to grant permission to third-party software applications to access their data as well.
- Payers are beginning to demand APIs from their vendor community that can be safely consumed and orchestrated, to form new apps, workflows, business and operating models. Conversely, API marketplaces are rapidly proliferating providing services, such as access to medical records, delivering insights-as-a-service and converting various file types to FHIR.
- Gartner expects continued acceleration in payer adoption of this capability in 2022 as the pace of new business requirements increases.

Obstacles

- Although regulations are driving API adoption acceleration, there is no centralized regulatory or industry body for approving and registering third parties or monitoring open API use. This places the full burden of API policy management on payers. It will result in fragmented experience for partners seeking connection, which will slow ecosystemwide data and workflow integration efforts.
- Data integrity issues and high-profile security breaches will exacerbate existing consumer trust challenges, limiting in the short term the expansion of APIs beyond compliance use cases.
- Legacy architecture does not natively support APIs, so payers will have to modernize to optimize the business value.
- The effort and funding needed to address these challenges, plus the proliferation of vendor-supported point solutions create significant obstacles to adoption. Thus, this technology is sliding into the Trough of Disillusionment and we anticipate that it will achieve mainstream adoption within five years.

User Recommendations

- Prioritize APIs to implement and consume, based on your organization's maturity with API technologies, use-case scenarios, organizational requirements and business value implications unique to your project or initiative.
- Implement an API program to streamline the delivery of new business capabilities, expand business channels, extend existing applications, enable multichannel clients and facilitate integration.
- Leverage API management technologies to help your teams design, build, consume, operate, secure and manage your APIs.
- Use APIs when conventional industry interoperability standards fall short of health information and workflow needs.
- Use API management platforms in conjunction with consent, identity and access management technologies to centralize authentication and authorization for your APIs.

Sample Vendors

Axway; Boomi; Google Cloud (Apigee); IBM; Microsoft; MuleSoft; PilotFish; TIBCO Software; WSO2

Gartner Recommended Reading

Quick Answer: Use FHIR to Jump-Start Clinical Data Integration for U.S. Healthcare Payers

Innovation Insight for Digital Healthcare Payer Platform

Healthcare Administration Requires a Real-Time Payment Ecosystem Under Value-Based Care

6 Critical Technologies to Advance Healthcare Ecosystem Orchestration Ability

Prospective Payment Integrity Solutions

Analysis By: Mandi Bishop

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Early mainstream

Definition:

Prospective payment integrity (PPI) solutions enable payers to proactively avoid paying claims improperly, versus paying and then chasing claims dollars. These technologies facilitate accurate claims processing with minimal payment leakage, addressing contracts and services, eligibility, and payment accountability along with fraud, waste and abuse (FWA). They incorporate claims editing, data mining and complex clinical review, as well as advanced analytics and AI.

Why This Is Important

PPI solutions mitigate a broad range of potentially improper claims payment activities — spanning revenue integrity, payment accuracy and FWA prevention solutions — by identifying, and correcting for, claims inaccuracies prior to claims payment. The Department of Health and Human Services (HHS) estimated it paid more than $153 billion in healthcare claims improperly in 2021 and the Department of Justice (DOJ) recovered over $5 billion in fraudulent claims.

Business Impact

PPI solutions:

- Thwart fraud
- Decrease claims spend realistically by 1% to 2% (with some vendors claiming 10% or more)
- Improve claim denial rate
- Reduce the percentage of claims requiring rework
- Lower the cost per claim processed
- Reduce claims-related provider call volume
- Limit member touchpoints related to areas such as subrogation and balance billing
- Improve member and provider experience
- Identify and educate providers by illuminating patterns of poor payment integrity practices

Drivers

- Cost avoidance from PPI solutions and practices represents a larger benefit opportunity than revenue recovery. Between 3% and 7% of all healthcare claims are paid inaccurately — and only a fraction of those claim payments are later corrected. In 2021, HHS improperly paid 13% of its payments to federal healthcare programs administered by the Centers for Medicare and Medicaid Services (CMS).
- Overutilization and upcoding are more common than fraud. Rising claims complexity due to factors like COVID-19 payment policy exceptions, specialty drugs, medically complex patients and value-based payment arrangements requires sophisticated payment integrity solutions.
- Capabilities like social analytics, predictive modeling and machine learning are proliferating across PPI solutions, and payers are starting to embrace this approach. There is a burgeoning market of AI-enabled PPI solution providers with some specializing in fraud and a few offering robust, integrated case management across payment integrity functions.
- The ongoing expansion and scaling of virtual care solutions increased opportunities for fraud, as healthcare organizations exploited insufficient oversight to defraud insurers in areas such as durable medical equipment (DME) and prescription drugs. In April 2022, the DOJ brought criminal charges against 21 individuals — including physicians and healthcare executives — in connection with $150 million in fraud schemes.
- Given the maturity and increased procurement activity of PPI solutions such as claims editing and pricing, as well as the continuing interest and investment in FWA solutions, PPI solutions are sliding into the Trough of Disillusionment. We expect these solutions to reach mainstream adoption within five years.

Obstacles

- While almost all payers have some form of retrospective payment integrity scanning in place today, they have been slow to adopt PPI — in part because the ROI for cost avoidance is more difficult to calculate than for cost recovery. For example, payers do not typically account for the cost avoidance associated with claim edits within an integrated revenue cycle management (RCM) process. Additionally, payers often implement incentives for staff to open cases for postpay audits that create an unintended disincentive for PPI.
- Few payers have an enterprise payment integrity program that provides governance and oversight across all regions, products, provider networks, capabilities and vendors. Fragmented procurement and operations of PPI solutions diminishes the ROI of cost avoidance or, at least, accurate aggregation of savings realized across the organization and provider networks.

User Recommendations

- Invest in PPI solutions that detect and prevent improper payments in addition to those that perform retrospective claims payment analysis. These activities can start before claim submission (ensuring the provider submits an accurately coded claim) and can follow through adjudication (ensuring the claim detail aligns to payment and medical policies).
- Investigate expanding relationships with existing payment integrity vendors after evaluating their capabilities to deliver PPI solutions.
- Alleviate dependency on internal IT by replacing internally developed and poorly performing methods with simple-to-use solutions that provide end users with greater flexibility and decision-making capability.
- Seek vendor solutions that facilitate provider education processes to improve provider experience, head off issues before they arise and reduce payers' administrative costs.
- Prioritize solutions that employ advanced analytics, automation and AI to quantify and optimize cost avoidance.

Sample Vendors

Change Healthcare; ClarisHealth; Codoxo; Cotiviti; EXL; Healthcare Fraud Shield; HealthEdge; MultiPlan; Optum; Zelis

Gartner Recommended Reading

Top 4 Ways Healthcare Payers Can Reduce Provider Burnout by Improving Payment Integrity

Adopt Prospective Payment Integrity to Thwart Healthcare Fraud and Improper Claims Payment

Fight Healthcare Fraud With Enterprise Payment Integrity for U.S. Payer CIOs

Clinical Data Integration

Analysis By: Mandi Bishop

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Clinical data integration (CDI) enables the acquisition, normalization and enrichment of patient data from an electronic health record (EHR) system or health information exchange (HIE), and the integration of that data with payer systems and business processes. Formats include Fast Healthcare Interoperability Resources (FHIR); HL7 admission, discharge and transfer (ADT); Continuity of Care Documents (CCDs); and legacy continuity of care records (CCRs) or proprietary files.

Why This Is Important

By acquiring and ingesting clinical data directly from provider EHRs, payers can substantially improve their administrative efficiency and reduce costs through better provider/partner alignment, advance population health management capabilities, increase their revenue, and improve the member experience. CDI enables timely and efficient care coordination and decision support as well as meaningful interactions with all ecosystem constituencies.

Business Impact

Scaling CDI helps payers achieve:

- Risk score optimization: Richer documentation of medical risk to improve revenue in programs such as Medicare Advantage.
- Quality measure improvement: Improving revenue related to the Healthcare Effectiveness Data and Information Set (HEDIS) and Medicare Star ratings.
- Care coordination: Enabling faster authorizations for care and the timely exchange of a member's health data between providers.
- Advanced analytics: Identifying rising risk populations before they become high-cost.

Drivers

- CIOs' CDI investments slowed in 2022, as the U.S. Centers for Medicare & Medicaid Services (CMS) declined to enforce the payer-to-payer provision of the 2020 interoperability mandate. However, most payers — and the vendor market supporting them — are preparing for payer-to-payer data exchange using FHIR. Many payers are also advancing HL7 Da Vinci Project value-based care use cases such as prior authorization.
- Many payers are shifting from implementing CDI for minimum compliance with the CMS mandates to investing in it as a strategic capability that enhances provider and member experience. The use cases for FHIR open APIs are expanding such as enabling consumer-mediated data exchange at enrollment to accelerate referrals, authorizations and enrollment in care management programs.
- Regulations such as the No Surprise Act and the Transparency in Coverage final rule are increasingly focused on administrative efficiency and transparency in cost and decision-making. CDI contributes to streamlining administrative processes and enables payers to become rich information sources for members and providers.
- The COVID-19 pandemic has highlighted the critical role clinical data plays in supporting population health and care management, as well as contextually appropriate engagement.
- We see an upward trend in strategic planning initiatives to establish CDI as a payer core capability, as well as a rapidly expanding vendor landscape. Thus, we advance this profile just beyond the midpoint between the Peak of Inflated Expectations and the Trough of Disillusionment and expect CDI to achieve mainstream adoption within the next three years.

Obstacles

- Payers are not currently well-positioned to respond to CDI requirements. The approaches and technologies that support CDI today remain highly fragmented, and payers haven't typically acquired and processed clinical data at scale with any consistency at scale.
- Technical challenges — such as standardized and mandated EHR interoperability methods — are still substantial but decreasing, with the industry and regulatory entities coalescing around FHIR data exchange standards.
- Provider data-sharing agreements, as well as change management across healthcare information technology (HIT) vendors, provider IT departments and payer IT departments, remain barriers.

User Recommendations

- Align CDI initiative goals to the ONC and CMS standards and participate in the Da Vinci Project to take advantage of ecosystemwide common FHIR APIs and administrative use case development.
- Assess barriers between payers and providers that would prevent success, and develop a strategy to prioritize and address them. Providers may not trust that the data shared will be used for only agreed-upon purposes or may not have the IT resources or funding for new interfaces.
- Invest in an enterprisewide solution. Emphasize data quality, normalization, enrichment and integration capabilities, not just the acquisition of the clinical data from various EHRs.
- Substantiate vendor statements about their CDI capabilities, analytics enablement and insight delivery. Require disclosure of any solution components that depend on partner capabilities, and details about those partnerships. Evaluate internal versus external capabilities — and generally, a vended solution will be optimal.

Sample Vendors

1upHealth; Arcadia; Datavant; Diameter Health; Epic; HealthLX; IMAT Solutions; Moxe; Smile CDR; Verinovum

Gartner Recommended Reading

Clinical Data Integration Capabilities and Sourcing Recommendations for U.S. Healthcare Payers

Clinical Data Integration: IT Readiness Assessment and RFP Questions for U.S. Healthcare Payer CIOs

Quick Answer: Use FHIR to Jump-Start Clinical Data Integration for U.S. Healthcare Payers

BPaaS for U.S. Healthcare Payers

Analysis By: Connie Salgy, Mandi Bishop

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Business process as a service (BPaaS) is the delivery of business process outsourcing (BPO) services via internet-based technologies. BPaaS services are typically multitenant and automated, often with no dedicated labor pool per client. BPaaS is being adopted across knowledge-intensive activities (e.g., utilization management, analytics and risk adjustment optimization) as well as transaction-intensive ones (e.g., claims processing).

Why This Is Important

The value proposition for outsourcing is changing. Payers traditionally outsourced to lower transaction costs for tasks such as claims data entry, document imaging, mailroom services and billing. Today, BPaaS lowers transaction costs while enabling higher-value functions, such as care management, by addressing process harmonization, simplified workflow, automation and integrated functional modules.

Business Impact

- Addresses longstanding inefficiencies by combining two discrete approaches to reduce IT spending: outsourcing and modernization.
- Reduces transaction costs and time to expansion into new product lines like Medicare Advantage plans.
- Outsources higher-value functions requiring domain expertise such as care management.
- More predictable consumption or subscription-based pricing than traditional BPOs, enabling more accurate financial forecasting and expansion into lower-risk product lines or joint ventures.

Drivers

- Payers today are prioritizing efficiency and cost optimization as highly as they do business growth. The BPaaS model focuses on reducing total labor hours as well as reducing the unit cost of labor, promising progress toward both goals.
- As BPaaS enables payers to overcome a lack of experience with new products and service offerings, adoption is accelerating commensurate with the continuing surge in new entrants to markets such as Medicare Advantage and managed Medicaid.
- Payers shifting toward composable business principles are reevaluating strategic versus commodity capabilities and exploring BPaaS partner sourcing options for orchestration opportunities.
- Competitive pressures and continued uncertainty make the BPaaS model's agility for sourcing capabilities attractive.
- With this renewed emphasis on efficiency and recognition that external sourcing options enable leapfrogging current organizational capabilities, Gartner is accelerating this innovation's Hype Cycle advancement to midway between the Peak of Inflated Expectations and the Trough of Disillusionment. We believe it will achieve mainstream adoption within the next two to five years.

Obstacles

- Reputational and operational risk resulting from a BPaaS vendor disruption or subpar service as well as concern for vendor dependency and lock-in.
- Lack of negotiation expertise or procurement appetite to venture away from traditional labor-based to outcomes-based contracts.
- Inexperience governing BPaaS engagements and insufficient oversight competencies.
- Unrealistic or misaligned value-realization expectations. Transactional or single-service solutions deliver a different value proposition than end-to-end strategic BPaaS options. Aggregated tactical solutions deliver cost savings but not necessarily equal value across all payer business processes. Single-service solutions may offer richer capabilities, but with a high cost to integrate those services. Strategic BPaaS can give payers access to high-value skills and a wider pool of in-demand resources, allowing payers to expand in knowledge-intensive activities without adding significant internal staffing.

User Recommendations

- Evaluate opportunities to achieve cost containment goals by increasing BPaaS labor and technology outsourcing arrangements over time.
- Assess BPaaS options when formulating a modernization or transformation strategy, and incorporate innovation (such as intelligent automation) into vendor evaluation criteria.
- Establish KPIs for business outcomes in vendor contract arrangements, such as reducing the unit cost of claims processing by 20%. BPaaS must be used for the outsourcing of responsibilities, as measured by results, rather than simple tasks. Include traditional SLAs (covering both transactions and access) as well as operational and technology monitoring in contract terms.
- Routinize oversight functions to ensure consistent, high-quality vendor performance.
- Include risk-sharing and innovation terms in any contracts in order to increase accountability.
- Prepare detailed risk management plans, including immediate, short-term and long-term mitigation elements.

Sample Vendors

Accenture; Catalyst; Change Healthcare; Cognizant; Deloitte; NTT DATA Services; Optum; PwC; UST; Wipro

Gartner Recommended Reading

Market Guide for U.S. Healthcare Payers' Core Administrative Processing Solutions

2022 CIO and Technology Executive Agenda: A U.S. Healthcare Payer Perspective

Market Definitions and Methodology: Public Cloud Services

Generation 2 Medical Shopping

Analysis By: Connie Salgy, Kate McCarthy

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Adolescent

Definition:

Generation 2 medical shopping transparency tools bring clarity and convenience to healthcare choices in line with what consumers have come to expect from other retail and online experiences. This includes the ability to compare providers and treatment locations, schedule appointments and make payments, satisfy administrative requirements and estimate costs with a high degree of accuracy using payer's contractual terms and the consumer's benefit plan.

Why This Is Important

Price transparency is now both a consumer expectation and a regulatory mandate in the U.S. Now fully implemented, the government requirements reshaped the healthcare industry by giving consumers real-time access to specific and comparable pricing. Federal regulators' explicit goal is to make it easy for consumers and third-party app developers to see the actual negotiated prices across a payer's network of contracted providers.

Business Impact

Generation 2 medical shopping and consumer price transparency have made payer-provider contract provisions clear to all, and thereby intensify the regional competitive dynamics among payers and providers. Third-party developers (including digital giants like Amazon and Google) are using the price data to strengthen their own relationships with consumers, putting incumbent healthcare organizations at business risk of disruption.

Drivers

- The Centers for Medicare and Medicaid Services' (CMS's) final guidance on price transparency and additional stipulations in the No Surprises Act has fueled generation 2 medical shopping. Payers and providers are required to make significant upgrades in functionality by moving away from average cost estimates to sharing actual contracted amounts.
- The ongoing adoption of virtual care is catalyzing generation 2 medical shopping as consumers continue to more proactively use digital solutions to manage their care.
- Vendors' speed, agility and interpretation of yet to be answered regulatory guidance will spur additional product development and new market entrants. Hence, we position generation 2 medical shopping tools in the Trough of Disillusionment as healthcare CIOs realize that current solutions are not yet fully built to support all final rules of the regulations.

Obstacles

- Consumers generally lack awareness of price transparency and its added benefits. Most consumers did not use the price transparency and estimation tools their payers and providers shared before the regulatory mandate, and may not start using these applications without a marketing push or integration with their member or patient portals.
- Generation 2 medical shopping tools require integration with providers' administrative IT systems and member communication workflows for medical shopping to be effective. Integration requires the ability to express medical and payment policy in system-readable business rules and in advance to the service being rendered, which in turn requires core administrative processing system enhancement.

User Recommendations

- Comply with regulations by buying or building capabilities to estimate final cost sharing amounts and relay them to members and providers in real time across multiple channels and integration points.
- Exceed minimum regulatory compliance by using real-time capabilities in cost estimation and member engagement to differentiate your organization from competitors like startups, retailers, digital giants, providers and incumbent payers.
- Devise a comprehensive rollout strategy by using cost sharing amounts to proactively inform members of care alternatives — including choice of competing providers and alternative treatment paths.
- Integrate medical shopping with administrative IT systems and consumer communication workflows for medical shopping to be effective. Integration requires the ability to express medical and payment policy in system-readable business rules in advance to the service being rendered, which requires strong core administrative processing and revenue cycle management systems.

Sample Vendors

Amino; Castlight Health; Healthcare Bluebook; HealthSparq; MDsave; PMMC; SmartShopper; SurgiPrice; Talon; Turquoise

Gartner Recommended Reading

Price Transparency Presents Challenges for U.S. Healthcare CIOs

Quick Answer: How U.S. Healthcare CIOs Can Boost Consumer Engagement With Price Transparency and CX

Healthcare Delivery Organization CIOs Must Act Now to Comply With New U.S. Price Transparency Regulations

Healthcare Consumer Insight as a Service

Analysis By: Kate McCarthy

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Adolescent

Definition:

Healthcare consumer insight as a service (HCIaaS) refers to applications that accelerate organizations' consumer data and analytic capabilities. HCIaaS is able to source data from multiple sectors or industries and employ advanced analytics techniques to derive predictive or prescriptive health-related insight. These insights are computed in real time, at the individual and population levels, and deliver insight into a workflow application via APIs.

Why This Is Important

Healthcare and life science organizations must build consumer insight to drive increasing digital engagement. Today's enabling technologies, such as electronic health records (EHRs), claim systems and enterprise data warehouses are limited in their ability to drive relevant insights. Thus, CIOs are increasing investment in HCIaaS as a way to establish more efficient paths to derive value from data.

Business Impact

HCIaaS is valuable to healthcare and life science organizations because it:

- Drastically lowers the barriers to adoption for advanced analytics (including AI)
- Reduces the size requirement for many population health or care management use cases, where sufficient sample is needed to generate meaningful insight
- Presents a less risky, more agile solution path for small analytics groups taking their first steps into consumer analytics

Drivers

- The applications that control healthcare workflows contribute to today's inefficiencies. EHRs, claims processing, revenue cycle management and care management applications universally lack the analytic deployment agility found in the best workflow systems across industries, such as digital commerce or logistics.
- HClaaS offers a mechanism to gain and apply the unique value of advanced analytics at the individual consumer level to critical healthcare workflows. It can alleviate the requirements of large datasets, integration of partner data sources, in-house data science talent, advanced analytics technology and decision hub architecture for putting predictions into workflow.
- In some cases, a middle ground of analytic marketplaces from industry cloud providers, commercial data resellers and public data aggregators will provide the best foothold for further progress.
- In the future, the HClaaS space is well-suited to becoming a "packaged business capability" in the model of the composable healthcare enterprise. HClaaS is especially important to small or midsize healthcare payers and providers that often lack internal resources to execute advanced data and analytic strategies.
- Early use cases for HClaaS will advance current analytic capabilities. For example, at-risk entities engaging in care management activities will replace their batch loads of "chase lists" and stratification scores with case-level API calls. These consumer risk and stratification scores will replace or supplement the scores often generated from conventional licensed predictive models.
- The addition of consumer and sociodemographic data will provide better targeting and intervention strategies, especially in addressing leading determinants of health and healthcare costs.

Obstacles

- There is little consistency in vendor offerings for HClaaS, which are available from diverse vendors, including EHRs, analytic platforms and martech solutions. Healthcare and life science organizations can struggle to identify the best solution for their needs.
- Data aggregation can be challenging for organizations with siloed departmental level data repositories.
- HClaaS delivered through martech are frequently limited to the marketing use case they are implemented to support, rather than being extensible to cross-enterprise use cases (care pathway management, care management, quality improvement).
- We continue to advance the HClaaS profile through the Trough of Disillusionment in acknowledgment of the enormous challenges any organization faces delivering pervasive analytic insight into the most crucial healthcare workflows.

User Recommendations

- Evaluate HClaaS solutions as an emerging, and potentially crucial, component in their enterprise analytics strategy to accelerate or replace internally developed healthcare consumer analytics.
- Prioritize use cases that are experimental and stand to gain the most lift from multisector data sources combined with advanced analytics techniques and that can be delivered directly into a workflow application.
- Differentiate next-generation care management by infusing analytics into workflows and applications.
- Meet with the chief medical officer or the chief medical informatics officer to discuss the care management use case and jointly attend an exploratory call with one of the representative vendors in this profile.

Sample Vendors

Cotiviti; Decision Point; HMS Networks; LexisNexis; EarlySign; NextHealth Technologies

Gartner Recommended Reading

Innovation Insight for Continuous Intelligence

Innovation Insight for Consumer Experiences in Healthcare and Life Sciences

Deliver Business Outcomes for Customer Analytics With Our Practical Data and Analytics Strategy and Operating Model

RPA for Healthcare Payers

Analysis By: Mandi Bishop

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Mature mainstream

Definition:

Robotic process automation (RPA) mimics manual human process by mapping interactions between computer keystrokes and data repositories and executing repetitive processes using a software "robot." Robotic processes can move or populate data in systems, document audit trails, conduct calculations, perform user actions and trigger downstream activities. However, the technology does not have the capacity to learn or adapt.

Why This Is Important

Adoption of RPA at scale is foundational to an enterprise automation strategy for healthcare payers. RPA reliably delivers faster transactions and fewer errors, and results in labor savings. Legacy modernization initiatives (particularly core system replacements) are notoriously difficult to fund and have long payback periods, so RPA provides a cost-effective option to deliver results and show value more quickly.

Business Impact

- Increase operational savings by freeing up resources or reducing cost.
- Improve purchaser alignment and Net Promoter Score (NPS) by instantly retrieving and reconciling information during interactions.
- Improve provider/partner alignment (and NPS) by streamlining administrative interactions.
- Assure compliance and data quality to avoid penalties.
- Reduce the percentage of claims requiring manual resolution.
- Replace phone calls to reduce IT service desk interactions.

Drivers

- According to the 2022 Gartner CIO and Technology Executives Survey, payers lag years behind highly composable organizations in adopting digital processes — and digital processes are critical for cost optimization and operational efficiency. RPA plays a foundational role in the task and process automation capabilities that streamline administrative workloads and are the starting points on the journey to hyperautomation (the AI-enabled orchestration of multiple automation capabilities).
- Purchasers, providers and partners increasingly expect real-time, one-stop data retrieval and process execution similar to what they experience with retailers and digital healthcare organizations. Low first-call resolution rates or weeks-long waiting periods for contract instantiation or authorization decisions are no longer acceptable.
- Due to the high benefit rating and relative maturity of the technology, combined with the evidence of significant interest and increased investment from payer CIOs, we are accelerating RPA through the Trough of Disillusionment. We anticipate that it will reach mainstream adoption within two years.

Obstacles

- RPA is not a panacea for legacy processes and systems. Without a proper strategy and oversight, RPA implementations will compound legacy debt and further complicate long-term modernization initiatives.
- Payers are establishing automation centers of excellence (COEs) to provide governance to maximize the value of RPA and minimize the risk associated with the haphazard use of these technologies. However, many payers do not have either the necessary subject matter expert and IT resource bandwidth or the mature process and information governance practices established to implement and optimize a COE.
- A high upfront implementation cost to establish new RPA capabilities may exist. Most vendors do not have gain-sharing pricing models.
- Clarity on the ROI amount and time frame is often elusive prior to implementation, and executive expectations for immediate savings are typically unrealistic. This leads to disappointment with the initial investment and can derail efforts to scale.

User Recommendations

- Apply RPA to manual, high-volume, repetitive, low-skill and structured data-driven processes that are routine and stable with well-defined rules.
- Set performance targets and implement key performance indicators (KPIs) for RPA, such as lowering cost per claim processed or increasing the rate of customer service call dispositioning.
- Assess internal IT staff against skills needed to effectively implement RPA while considering vendor partners to add expertise.
- Compare and contrast the vendors by focusing on ease of use to configure processes and alignment with existing IT and business skills, as well as value-added competencies such as domain expertise, integrated AI, business process management (BPM) and optical character recognition (OCR).
- Develop a centralized approach to enterprisewide RPA implementation and management to avoid replicating an environment similar to the proliferation of Excel-driven processes.
- Evaluate alternative options, including BPM tools and core system replacement.

Sample Vendors

Appian; Automation Anywhere; Microsoft; NTT DATA; Olive; Pegasystems; SS&C Technologies; UiPath; WorkFusion

Gartner Recommended Reading

Automation Mixology: When to Use RPA, AI and BPM for U.S. Healthcare Payers

Scale Automation in Healthcare Using a Center of Excellence

Strategic Automation Decision Framework: From RPA to AI on the Journey to Hyperautomation in Healthcare

Climbing the Slope

Cloud for Healthcare Payers

Analysis By: Mandi Bishop

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Cloud for healthcare payers tracks enterprise cloud strategy implementation, which is inclusive of new implementations as well as migration. Cloud computing provides internet-based scalable and elastic, IT-enabled capabilities as a service to external customers via public (shared), private (single organization) and hybrid solutions. Cloud benefits include economies of scale and security, as well as sharing of resources that can reduce costs and increase technology choices.

Why This Is Important

Cloud technology enables innovation and helps achieve adaptability with composable architecture. Cloud application and service providers are increasingly HITRUST-certified, HIPAA-compliant and willing to enter business associate agreements (BAAs), minimizing payers' liability concerns. Customer-facing applications should be cloud-first, even cloud-only. Cloud-based analytics environments reduce the time to value of "big data" workloads as well as upfront investment and IT support.

Business Impact

Cloud solution benefits include:

- Elasticity and agility that enable real-time health ecosystem participation.
- Cloud analytic services create a plausible path to short-term artificial intelligence (AI) value realization.
- Increased stakeholder alignment facilitated by improved information access and collaboration capabilities.
- Supports new IT operational model that embraces digital partnerability and ecosystem-sourced capabilities.

Drivers

- Cultural and risk obstacles to adoption are abating and cloud platform investments are accelerating, as 48% of payer respondents to Gartner's 2022 CIO and Technology Executives Survey report this as an area of new or additional funding.
- Hybrid work is here to stay. In Gartner's 2022 CIO and Technology Executives Survey, 22% of payer respondents indicate they will be increasing investment in digital workplace capabilities.
- Virtual care expansion continues, increasing the need for more real-time care team collaboration.
- Interoperability rules from the U.S. Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health IT (ONC) mandate API-based data exchange.
- Legacy architecture and processes are incapable of meeting the administrative needs of an increasingly complex partner ecosystem or the timely and open data sharing of the CMS and other regulatory mandates.
- Cloud architecture is fundamental for composable business and innovations such as serverless computing will continue to make cloud more affordable.
- Accelerated adoption means we advance this profile to the Slope of Enlightenment in 2022, and we anticipate mainstream payer adoption within two years.

Obstacles

- Many payers do not yet have a strategy to move legacy core systems to the cloud or to effectively integrate their data into the data fabric that is foundational to composable architecture.
- CEOs and boards are reluctant to prioritize increased funding for modernization initiatives — extending cloud adoption timelines. The shift from a capex to opex funding model is also a challenge for many organizations.
- The total cost of ownership (TCO) is actually higher for many payer use cases — contrary to popular wisdom. However, high TCO is primarily due to lifting and shifting legacy systems into the cloud instead of purpose-building applications.
- Humans managing the cloud will continue to introduce vulnerabilities that CIOs must actively mitigate and govern.

User Recommendations

- Articulate an updated position on cloud to the business, including its security, appropriateness for the enterprise, implications for existing data center investments and other benefits.
- Enforce a cloud-first mindset for all new development efforts and vendor engagements. Establish a cloud-first delivery option requirement for new RFPs, as well as contract renewals.
- Evaluate modernization initiatives to determine whether cloud migration (or replacement) would be more cost-effective, efficient and higher quality architecture than continuing custom development and data center investments. Going forward, cloud should be the preferred deployment option.
- Develop aggressive targets for having a significant portion of the IT portfolio within cloud environments within the next three to four years.
- Weigh cost, efficacy, solution speed to market and new capability delivery opportunities against business goals, compliance requirements and IT budget in the cloud decision process.

Sample Vendors

Amazon Web Services (AWS); ClearDATA; Cloudticity; Google; IBM; Microsoft; Oracle

Gartner Recommended Reading

Innovation Insight for Digital Healthcare Payer Platform

Tool: U.S. Healthcare Payer CIO Executive Presentation for Building the Composable Payer Business

Creating the Composable Healthcare Organization for Healthcare and Life Science CIOs

Tool: Healthcare and Life Science CIOs Executive Presentation for Composable Data and Analytics

Advanced Analytics Architecture for Payers

Analysis By: Jeff Cribbs

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Advanced healthcare analytics architecture represents payers' next-generation approach to deriving value from data. Traditional payer analytics architecture typically includes information portals (reports and dashboards) and an analytics workbench (data exploration). Advanced architecture adds data science capabilities (for advanced modeling) and a decision hub (to deploy real-time insights into operations), and coordinates all four functional elements.

Why This Is Important

Advanced analytics architecture enables more pervasive and forward-looking insight than payers can accomplish with conventional architecture. In critical areas like actuarial science, provider network analysis, and payment integrity, the addition of advanced analytics has enabled payers to differentiate the offerings and outperform their competition. This architecture also prepares a payer organization to adopt AI engineering with its more sophisticated emphasis on DataOps, ModelOps, and DevOps.

Business Impact

Challenges and opportunities in underwriting, consumer engagement, population health management and provider analytics have been primary drivers of payers' adoption of advanced analytics architecture. More recently, consultative analytics programs that provide ad hoc analysis as a part of external relationship management, have started to include more advanced statistical methods and modeling.

Drivers

- Most large healthcare payers now have one or more installations of a data science and machine learning platform, at least a few data scientists utilizing them, and a handful of projects or pilots completed, some successfully, many less so. This has normalized the presence of next-generation analytics talent and technology and laid a foundation for accelerated investment.
- Gartner clients say that partnership approaches with digital giants for cloud-based analytic services — especially Amazon Web Services (AWS) and Microsoft — have more of a defined "playbook" feel than even a year ago. This has accelerated further still with recent strategic partnerships between cloud providers and licensed advanced analytic tools, such as Microsoft Azure and SAS's Viya platform.
- Payer business and clinical leadership increasingly recognize the opportunity to derive more insight from nonconventional payer data sources. Examples of these new sources include EHR — originating data (increasingly available in FHIR resources), member wearables, call center recordings and home health workforce monitoring.
- We advance this profile significantly this year, largely in acknowledgment of the normalization of advanced statistical modeling in a growing number of payer use cases. We expect this profile to move beyond the Trough quickly over the next year, as the coordination of the "four functional elements" enumerated in the definition begins to catch up with technology investments that have already been made. If this proceeds as we expect, the profile will graduate from the Hype Cycle in 2024.

Obstacles

- Payer data is generally poorly governed, buried in organizational silos and hard to access. The renovation of the data core toward a “data fabric” architecture is the single greatest project facing payer analytics.
- Many payers have analytic environments with duplicative capabilities and use cases. This creates internal rivalries and confusion among various stakeholders about which environment is best suited to addressing new analytic requirements. There are constant questions regarding which kinds of roles and domain expertise ought to reside in IT, in adjacent data or digital organizations, or be deployed into business and clinical teams directly.
- Payer-specific solution providers have been slow, relative even to their healthcare provider counterparts, to add advanced analytic capabilities to their offerings.
- Payers chronically underinvest in the deployment technologies and operational systems that can make analytic insight and automation pervasive in the business.

User Recommendations

- Begin by incorporating advanced analytics in your enterprise-level data, analytics strategy and operating model (DASOM). This strategy must rationalize data management and analytic capabilities, and guide investment decisions in new capabilities (see Presentation: The Foundation of a Modern Data and Analytics Strategy).
- Invest today in data governance, master data management and enterprise services integration, which are concrete steps toward the data fabric foundation that will position payers well as new tools, functions and use cases become available.
- Investigate composable architecture, which presents special opportunities and efficiencies to payers who seek a more scalable way to deploy analytic insight into operational technology, through the creation of analytic packaged business capabilities.

Sample Vendors

Microsoft; RapidMiner; SAP; SAS; Tensile AI; Teradata; TIBCO Software

Next-Gen Core Administrative Processing Solutions

Analysis By: Connie Salgy

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Mature mainstream

Definition:

Next-generation core administrative processing solutions (CAPS) enable payers to manage their enrollment, premium billing, claims processing and payment operations more nimbly than with legacy applications. Solutions must meet the following criteria: support cloud delivery models; allow clients to configure policies and processing rules without IT; decouple modular business functions and support third-party module integrations; enable value-based payment; and provide configurable interfaces.

Why This Is Important

CAPS modernization is a payer strategic imperative that delivers operational improvements and administrative cost savings through increased efficiency and accuracy, freeing funds and resources for innovation. Monolithic legacy CAPS hinder business leaders' ability to bring new products to market quickly or support regulatory changes. Next-generation CAPS is an incremental step toward composable architecture — offering modern architecture, flexible delivery models and robust integration options.

Business Impact

- Lowers transaction costs, improves data access and streamlines operations.
- Employs modern architecture that supports real-time data and transaction processing.
- Enables business model changes such as value-based payment arrangements.
- Increases delivery model options to capitalize on cloud technology's economies of scale and security.
- Improves the ease of integration with payer or third-party applications.
- Decreases reliance on IT or expensive professional services to maintain policies and rules.

Drivers

- Payer business model diversification is accelerating, including complex care delivery and retail vertical integration. Next-gen CAPS solutions address this challenge by easing integration of new and complex product lines and enabling digital health partnership.
- Increasing number of policy exceptions and innovations in areas such as medical necessity and provider network alignment that require interoperable data and workflows across ecosystem partners.
- Regulatory mandates are forcing payers to improve the timeliness and transparency associated with various administrative processes such as understanding costs before a service is rendered, fee schedule matching and prior authorizations.
- Gartner interactions trends indicate accelerated investment in replacing legacy CAPS with cloud-based CAPS.
- CIOs who expect that CAPS meet next-generation criteria are shifting from evaluating these solutions as differentiating to considering these features to be table stakes for multiyear purchases. Thus, this profile is approaching the Slope of Enlightenment with an expectation that it will become mainstream within the next two years.

Obstacles

- Next-generation CAPS technologies are not new, yet conflicting payer business priorities, risk aversion and solution costs create impediments to mainstream adoption.
- Next-generation CAPS are cloud-delivered but are not cloud-native, not necessarily API-enabled, and not as client-configurable as advertised. Additionally are requiring end-to-end implementations necessary to support capability enablement.
- Replicating legacy processes and unnecessary customization with a new CAPS inhibits digital progress.
- Payers have an average adoption rate of composable thinking and business architecture according to the 2022 Gartner CIO Survey, yet struggle with composable technologies contributing to a significant gap in digitalization progress. Additionally are approximately two years behind digital optimization as compared to other industries.

User Recommendations

- Prioritize strategic versus commodity CAPS capabilities to evaluate investment decisions.
- Analyze whether licensed applications, SaaS or business process outsourcing (BPO and BPaaS) solutions for each CAPS capability are best.
- Evaluate new versions of CAPS as greenfield. Old CAPS versions are not representative. However, weigh prior experience with vendor delivery heavily.
- Search for modular CAPS components that allow a partial or phased implementation, and prioritize solutions that offer configurable interfaces.
- Validate the vendor's primary market. Some CAPS have their most significant footprint in a segment like provider-led health plans, TPAs or dental. Consider whether influencing a vendor's product roadmap outweighs the early adopter risk.
- Address the diminishing resource pool available to support legacy systems. Updated technologies will entice job candidates.

Sample Vendors

Cognizant; HealthEdge; Oracle

Gartner Recommended Reading

U.S. Healthcare Payer CIOs Must Pursue Next-Generation Core Administrative Processing Solutions

Market Guide for U.S. Healthcare Payers' Core Administrative Processing Solutions

2022 CIO and Technology Executive Agenda: A U.S. Healthcare Payer Perspective

Healthcare Administration Requires a Real-Time Payment Ecosystem Under Value-Based Care

U.S. Healthcare Administration's Future Requires a Real-Time Payment Ecosystem Powering Value-Based Care

Population Health Management Solutions

Analysis By: Sachin Dev, Jeff Cribbs

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Population health management (PHM) solutions are sets of IT capabilities and related services that enable healthcare organizations to achieve health, cost and experience goals for a discrete population of individuals. These capabilities commonly include data integration, performance analytics, care management and patient engagement.

Why This Is Important

Many global health systems struggle with a common set of challenges: rising medical costs, disparities in access, inconsistent clinical outcomes and aging populations. PHM, as an operational model of value-based care, focuses on care management and care coordination initiatives to improve quality of care and reduce healthcare costs.

Business Impact

Fully implemented PHM technology will enable improvement in most aspects of healthcare operations. However, organizations typically deploy PHM progressively as they gain experience in value-based care, learn more about the technology, and find more of their financial incentives reliant on successfully operating in a PHM model. The typical progression, in order, is: (1) data management; (2) reporting; (3) performance management; (4) workflow (care management); and (5) patient engagement.

Drivers

- Value-based care continues to accelerate in both public and privately funded health systems. More organizations are signing at-risk contracts and there is more money at stake in renewing those contracts.
- National eHealth initiatives often include more mature PHM capabilities — such as the integration of health and social care, community-based care coordination, and remote patient monitoring.
- Business models are changing incrementally, and organizations often install initial technology support without a full vision of PHM capability. The vendor market has adapted, however, and many offer a sequential playbook and modular capabilities to better align to roadmap stage and progress.
- In recognition of the number of new innovations bolstering care management and interest from our end users, we advance population health management solutions further on the Hype Cycle into early mainstream market maturity with increasing adoption expected over the next year.

Obstacles

- Healthcare organizations often make PHM investments very narrowly to support the new requirements of a value-based contract or initiative. This includes acquisition of claims data, management of an attribution patient registry or certified quality reporting. The lack of a comprehensive PHM technology vision means initial capabilities are often not forward-compatible with new capabilities or requirements.
- Technology solution design for PHM, particularly for healthcare providers, is complicated by a lack of comprehensive PHM vision from healthcare organizations. PHM capabilities that overlap with adjacent spaces — like electronic health record (EHR), CRM and health information exchange (HIE) — and confusing vendor hype.
- Megasuite EHR vendors offer PHM capabilities, but they often do not keep pace with more mature PHM program requirements.
- Efforts to configure the EHR for PHM compete with a long list of conventional care delivery-focused EHR optimization projects.

User Recommendations

- Ensure that immediate PHM solution decisions are compatible with a robust population health vision that extends at least five years into the future.
- Evaluate your incumbent EHR vendor objectively by asking for its reference clients with the most mature population health implementations. Then compare those experiences with PHM vendor references with similar levels of program maturity.
- Assess the vendor's support model beyond the technical nuts and bolts. Understand their commitment to helping you transform your operations and achieve your targeted PHM objectives.
- Explore each vendor's built-in social determinants of health (SDOH) capabilities and ability to incorporate new external data sources as best practices continue to advance.

Sample Vendors

Arcadia; CareEvolution; Cedar Gate Technologies; Forward Health Group; Health Catalyst; IBM Watson Health; Innovaccer; Lightbeam Health Solutions; Optum

Gartner Recommended Reading

Population Health Management Framework for Healthcare Provider CIOs

Video: 2021 Eye on Innovation Awards in Healthcare and Life Sciences — Population Health Management With Early Surgery Indicator (Bupa Arabia)

Healthcare CIOs: Enable Real-Time Ecosystem Collaboration to Excel in Value-Based Care

AI Strategy

Analysis By: Jeff Cribbs

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Artificial intelligence (AI) applies advanced analytic and logic-based techniques to support and automate decisions, to offer interpretation of events and to take actions. Many applications of AI technology extend to healthcare payer functions. The AI strategy profile tracks the adoption of formal, enterprisewide AI strategies by healthcare payers.

Why This Is Important

In the early years of payer AI (generally 2014 through 2019), a majority of executive actions relative to AI occurred under the auspices of "innovation" and, as a result, lacked strategic coherence. Today, many payers, and nearly all of the largest payers, have AI strategy embedded in their business and technology strategy. As early adopting payer organizations begin to deliver real outcomes with their AI investments, competitive pressure is mounting.

Business Impact

An AI strategy will move payers beyond uncoordinated experimentation with AI to effective investment decisions, ROI and solution delivery. An AI strategy:

- Clearly defines AI for the organization
- Assesses the potential business impact
- Identifies valuable AI use cases
- Guides solution design decisions, such as insourcing/outsourcing, packaged applications, AI-enabled cloud services and in-house algorithmic development

Drivers

- Payer market leaders have demonstrated the feasibility and business value of AI, especially in narrow-scope use cases, such as medical chart abstraction (for authorizations, risk score optimization or medical audits), chatbots and claims processing.
- Technology and service providers that have productized AI solutions installed to deliver the benefits of AI technology without the high project costs and risks of internal development.
- Payer executive leaders' growing awareness of inefficient utilization of AI resources, such as data science and machine learning platforms and data science talent.
- Best practices in AI engineering across industries have become the new fixation of early-adopting payers, creating more urgency among lagging payers to establish an AI strategy.
- This profile has advanced quickly in recent years. The long tail of lagging payers will remain for years, but we estimate current payer adoption of AI strategy at 40% to 50% in 2022 — sufficiently mainstream to make this its last appearance on the Hype Cycle.

Obstacles

- Payer business and technology leaders at lagging organizations who perceive AI as too far away for their organization or feel protected from competitive threat of AI capabilities in the market.
- Payer business leaders intent on implementing one-off solutions independent of an AI strategy and governance.
- Concern that AI will introduce new risks that the organization might run afoul of ethical standards or that AI will be a direct threat to replace current workers.
- AI projects that have underdelivered or failed altogether. Early AI projects have often failed for two reasons: (1) project scope was too broad, encompassing executive tasks that today's AI is ill-suited to achieve; (2) insufficient attention was given to the integration of AI into the operational technology and the acceptance and adoption by users.

User Recommendations

- Create an AI strategy and maintain it with a cross-functional team (sponsored by the innovation group, if it exists) to tie together disparate initiatives and set out consistent measures of progress, if your organization does not have one. Every U.S. healthcare payer should have an enterprise AI strategy.
- Add stand-alone AI strategies to comprehensive strategic planning processes and artifacts over time. These may include the business strategy, the IT strategy or the enterprise data and analytics strategy.
- Manage stakeholder expectations about the state and impact of the technology. This is a key purpose of an AI strategy document, wherever it resides.
- Modernize the enterprise analytics architecture — especially the data science workbench and the decision hub. More sophisticated organizations with larger data resources are more likely to internally develop and deploy AI applications.

Sample Vendors

EXL; Fractal Analytics; HCL; Quantiphi

Gartner Recommended Reading

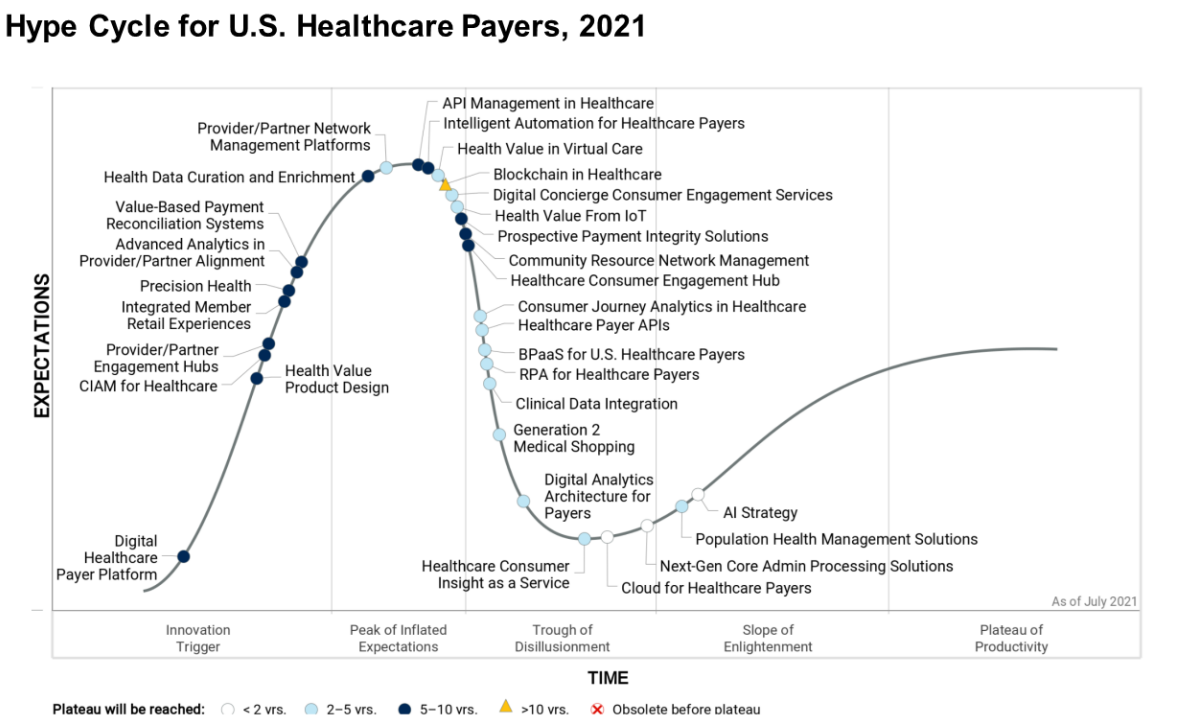
Infographic: Artificial Intelligence Use Case Prism for the U.S. Healthcare Payer Industry

Tool: AI Strategy Document

The Current State of Artificial Intelligence and Its Strategic Direction

Appendixes

Figure 2: Hype Cycle for U.S. Healthcare Payers, 2021



Source: Gartner (July 2021)
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Source: Gartner (July 2021)

Hype Cycle Phases, Benefit Ratings and Maturity Levels

Table 2: Hype Cycle Phases

(Enlarged table in Appendix)

Phase	Definition
Innovation Trigger	A breakthrough, public demonstration, product launch or other event generates significant media and industry interest.
Peak of Inflated Expectations	During this phase of overenthusiasm and unrealistic projections, a flurry of well-publicized activity by technology leaders results in some successes, but more failures, as the innovation is pushed to its limits. The only enterprises making money are conference organizers and content publishers.
Trough of Disillusionment	Because the innovation does not live up to its overinflated expectations, it rapidly becomes unfashionable. Media interest wanes, except for a few cautionary tales.
Slope of Enlightenment	Focused experimentation and solid hard work by an increasingly diverse range of organizations lead to a true understanding of the innovation's applicability, risks and benefits. Commercial off-the-shelf methodologies and tools ease the development process.
Plateau of Productivity	The real-world benefits of the innovation are demonstrated and accepted. Tools and methodologies are increasingly stable as they enter their second and third generations. Growing numbers of organizations feel comfortable with the reduced level of risk; the rapid growth phase of adoption begins. Approximately 20% of the technology's target audience has adopted or is adopting the technology as it enters this phase.
Years to Mainstream Adoption	The time required for the innovation to reach the Plateau of Productivity.

Source: Gartner (July 2022)

Table 3: Benefit Ratings

Benefit Rating ↓	*Definition* ↓
Transformational	Enables new ways of doing business across industries that will result in major shifts in industry dynamics
High	Enables new ways of performing horizontal or vertical processes that will result in significantly increased revenue or cost savings for an enterprise
Moderate	Provides incremental improvements to established processes that will result in increased revenue or cost savings for an enterprise
Low	Slightly improves processes (for example, improved user experience) that will be difficult to translate into increased revenue or cost savings

Source: Gartner (July 2022)

Table 4: Maturity Levels

(Enlarged table in Appendix)

Maturity Levels	Status	Products/Vendors
Embryonic	In labs	None
Emerging	Commercialization by vendors Pilots and deployments by industry leaders	First generation High price Much customization
Adolescent	Maturing technology capabilities and process understanding Uptake beyond early adopters	Second generation Less customization
Early mainstream	Proven technology Vendors, technology and adoption rapidly evolving	Third generation More out-of-box methodologies
Mature mainstream	Robust technology Not much evolution in vendors or technology	Several dominant vendors
Legacy	Not appropriate for new developments Cost of migration constrains replacement	Maintenance revenue focus
Obsolete	Rarely used	Used/resale market only

Source: Gartner (July 2022)

Document Revision History

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Hype Cycle for U.S. Healthcare Payers, 2018 - 18 July 2018

Hype Cycle for U.S. Healthcare Payers, 2017 - 14 July 2017

Hype Cycle for U.S. Healthcare Payers, 2016 - 1 July 2016

Hype Cycle for U.S. Healthcare Payers, 2015 - 1 July 2015

Hype Cycle for Healthcare Payers, 2014 - 23 July 2014

Hype Cycle for Healthcare Payers, 2013 - 23 July 2013

Hype Cycle for Healthcare Payers, 2012 - 24 July 2012

Hype Cycle for Healthcare Payers, 2011 - 20 July 2011

Hype Cycle for Healthcare Payers, 2010 - 16 July 2010

Hype Cycle for Healthcare Payers, 2009 - 30 July 2009

Hype Cycle for Healthcare Payers, 2008 - 27 June 2008

Hype Cycle for Healthcare Payers, 2007 - 29 June 2007

Recommended by the Authors

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Tool: Gartner Essential Frameworks — U.S. Healthcare Payers

Tool: U.S. Healthcare Payer CIO Executive Presentation for Building the Composable Payer Business

Innovation Insight for Digital Healthcare Payer Platform

Industry Vision: Health Value Management, U.S. Healthcare Payers' Next-Generation Transformation Strategy

Healthcare Administration Requires a Real-Time Payment Ecosystem Under Value-Based Care

Strategic Planning Presentation on the CARING Healthcare Payer

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Table 1: Priority Matrix for U.S. Healthcare Payers, 2022

Benefit	*Years to Mainstream Adoption*			
↓	***Less Than 2 Years*** ↓	***2 - 5 Years*** ↓	***5 - 10 Years*** ↓	***More Than 10 Years*** ↓
Transformational		Healthcare Payer APIs	Community Resource Network Management Consumer-Centric Health Products Digital Healthcare Payer Platform Hyperautomation for Healthcare Payers Precision Health	Autoadapting and Autocomposing Products Blockchain for Healthcare

Benefit ↓	*Years to Mainstream Adoption*			
	Less Than 2 Years ↓	*2 - 5 Years* ↓	*5 - 10 Years* ↓	*More Than 10 Years* ↓
High	Advanced Analytics Architecture for Payers AI Strategy Cloud for Healthcare Payers RPA for Healthcare Payers	Clinical Data Integration Consumer Journey Analytics in Healthcare Digital Health Navigator Health Data Curation and Enrichment Population Health Management Solutions Prospective Payment Integrity Solutions Provider/Partner Network Management Platforms	CIAM for Healthcare Integrated Member Retail Experiences Intelligent Prior Authorization	
Moderate	Generation 2 Medical Shopping Next-Gen Core Administrative Processing Solutions	BPaaS for U.S. Healthcare Payers Healthcare Consumer Insight as a Service	API Management in Healthcare	
Low				

Source: Gartner (July 2022)

Table 2: Hype Cycle Phases

Phase	*Definition*
Innovation Trigger	A breakthrough, public demonstration, product launch or other event generates significant media and industry interest.
Peak of Inflated Expectations	During this phase of overenthusiasm and unrealistic projections, a flurry of well-publicized activity by technology leaders results in some successes, but more failures, as the innovation is pushed to its limits. The only enterprises making money are conference organizers and content publishers.
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Phase ↓	Definition ↓

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