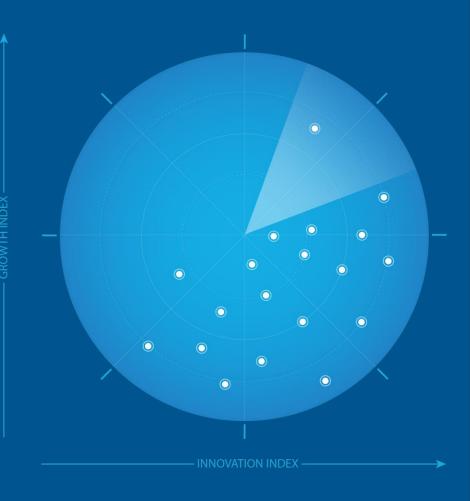
Frost Radar™: US Population Health Management Market, 2021

A Benchmarking System to Spark Companies to Action - Innovation That Fuels New Deal Flow and Growth Pipelines

Global Digital Health
Transformation Research
Team at Frost & Sullivan



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Strategic Imperative

- After pausing while the US healthcare industry struggled to contain COVID-19, the stringent audit
 process for value-based care (VBC) is back in full swing for 90% of Medicare reimbursement that is
 currently attributed to some form of quality or risk-based payment plan. Additionally, CMS has
 launched new guidance for value-based reimbursement among the Medicaid population, in which
 67% of reimbursement remains fee-for-service (FFS).
- The expanded scope of VBC will compel health systems to invest in a range of public health management (PHM) capabilities that cover all types of government-sponsored health insurance and demonstrate proven ability to meet quality performance criteria for specific insured populations (e.g., Medicare Advantage, Medicaid Advantage, and Long-Term Services and Supports).
- Accountable care organizations (ACOs) are increasing their enrollment into risk-based payment plans (from 9% of all ACOs in 2017 to 74% in 2020) and driving adoption of PHM solutions that aid cross-continuum data interoperability and integrated care management.
- However, next-generation ACOs (NGACOs) that pioneered adoption of VBC payment plans are failing to report the desired business outcomes. In fact, 50 such NGACOs reported additional spending of \$93 million in the first 2 years of their program against savings of \$86 million, which they reported in the first year of the same program. Consequently, they are devising PHM strategies that guarantee improved financial outcomes while being clinically result-oriented and operationally streamlined.

CMS—The Centers for Medicare & Medicaid Services
Source: Frost & Sullivan

Strategic Imperative (continued)

- Private payers are still struggling to harmonize provider connectivity across all members and are
 failing to bridge gaps, as observed in revenue cycles, quality ranking, and clinical accreditation. As
 such, newer PHM platform capabilities are designed to change the status quo by automating
 workflow adjustments, clinical protocol deployment, and utilization management for each member
 at a network level.
- Apart from payers and payer-providers, providers (non-ACO hospitals) have become receptive to PHM at the outset of their investment in an increasing range of virtual care platforms (telehealth, CDSS, data analytics, cloud-based PaaS) that require bi-directional data aggregation and contextualization. PHM platforms play an important role in supporting that workflow.
- Additionally, all providers still struggle to improve their claims' first-pass rate and cost-of-denials management for VBC contracts. The most successful PHM platforms support RCM vendors with integrated insights that predict triggers of denial while claims are being prepared and coded.
- Patients of all age groups have become more familiar with web-based outpatient care. They are
 using clinical-grade wellness and behavioral health enablers that promise to manage or help reverse
 chronic conditions. Likewise, payers and providers are deploying a range of PHM capabilities that
 digitally deliver therapeutic plans and prioritize 1:1 coaching (with social service agencies) directly
 to patients based on specific clinical conditions and social determinants of health (SDoH), such as
 socioeconomic data, physician environment, health behaviors, and access to healthcare.

CDSS—Clinical Decision Support System; PaaS—Platform as a Service

Strategic Imperative (continued)

- Non-PHM companies (data analytics, cloud-based HIT, traditional EMRs, and RCM service providers) are transitioning to third-party care coordination, patient engagement, and quality reporting modules that allow them to bring patient-generated data back to health systems from their communities/home. These capabilities support health systems' goal of reporting clinical outcomes at a population level—an important perquisite to higher-quality ranking. These tools further allow them to negotiate better payment plans with their payers based on reported evidence of reduced clinical utilization.
- Core PHM companies are actively collaborating with virtual care platforms to ensure all-round patient management (engagement and monitoring) at a community level. This trend has also aided some of the major M&As (Ex. Optum acquired Vivify Health in 2019) in the field of PHM.
- Among the core PHM companies, the market leaders have also deployed a range of PHM services
 (care management, quality performance management, patient outcomes management etc) on
 behalf of payors and providers that are increasingly outsourcing their entire post-acute patient
 management and member performance optimization offices to these integrated IT + service
 vendors.

HIT—Healthcare IT; EMRs—Electronic Medical Records; RCM—Revenue Cycle Management

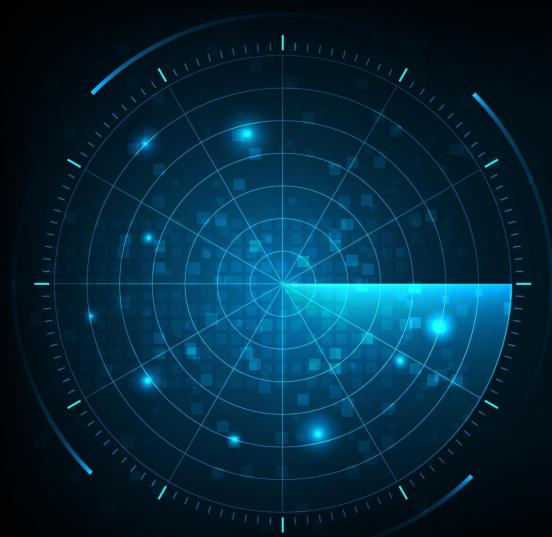
Growth Environment

- After a slump in 2020 caused by the prioritization of essential COVID-19 services, the US population health management market is back on a rapid growth trajectory. This is due to pervasive adoption of quality or risk-based payment plans across both commercial and government solutions.
- Frost & Sullivan forecasts that in 2021, the US PHM market will generate revenue of \$7.59 billion, or 31% higher than in 2020. The payers and payer-providers segment will remain the top revenue contributor. Its share as a percent of total revenue is expected to increase to 47.4% in 2021 from 43.4% in 2020. This is the only segment that will contribute more than \$1 billion toward PHM in one financial year (FY 2021).
- Such high growth is attributed to payers' focus on personalized care management for all members
 across the care continuum. Payers will leave no stone unturned to reduce preventable clinical
 utilization among existing members, close financial gaps across its provider networks, and widen
 reach to non-insured or under-insured consumers.
- The other top growth enabler in terms of aggregate market revenue is ACOs. This segment will contribute 36.4% of the total market, or \$600 million more in 2021 than in 2020.

Growth Environment (continued)

- Most ACOs (including self-insured employers that voluntarily embrace VBC plans) are not delivering
 the desired outcomes. As a result, they are opting for pure-play capabilities that will improve the
 performance of their incumbent PHM programs, which are slated to continue for at least another 3
 to 5 years.
- Dedicated attention is now given to specific chronic conditions for which CMS has plans to reimburse the cost of PHM IT across the care continuum.
- End users will merge virtual care platforms in PHM workflows to aid evidence-based patient management at a community level.

FROST & SULLIVAN

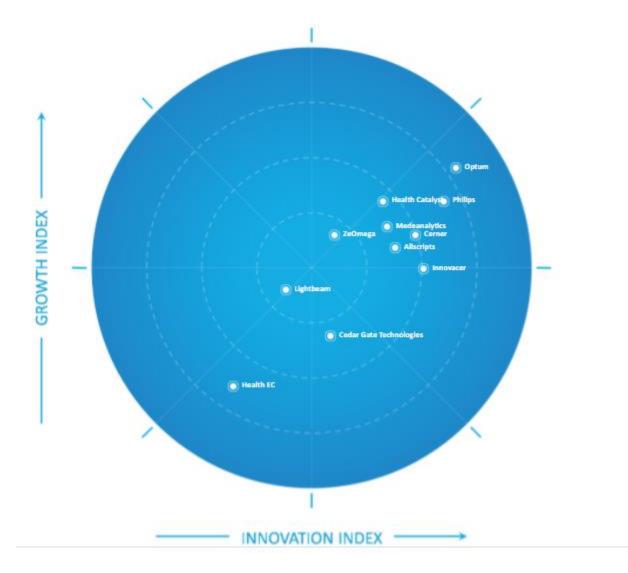


Frost Radar™

US Population Health Management Market, 2021

Frost Radar™: US Population Health Management Market,

2021



Frost Radar™: Competitive Environment

- In a field of more than 50 industry participants, Frost & Sullivan independently plotted the <u>top 11</u> companies in this Frost Radar™ analysis. Optum, Philips, Cerner, and Health Catalyst emerged as the leaders of the US PHM market for 2021.
- Optum scored the highest due to its Center of Excellence (CoE)-based PHM approach to chronic and rare diseases. The firm's ability to address community health needs with AI-enabled PHM workflows coupled with targeted coaching and cloud-based intervention make it the undisputed leader.
- **Philips** is recognized for its best-in-class innovation in PHM. It is the only PHM company that has seamlessly integrated its PHM workflow with incumbent and third-party virtual care platforms, including remote patient monitoring (RPM), Internet of Medical Things (IoMT), telehealth, and hospital command centers.
- **Cerner** remains a top EMR company with flagship PHM capabilities. Cerner's new-found flexibility to collaborate with modular PHM companies has bolstered its relevancy and revenue in the US PHM market.
- Health Catalyst revolutionized how third-party PHM IT initiatives are optimized. It offers custom
 configuration, pre-built rules engine, and superior data management capabilities to ensure every
 PHM initiative is successful.

Frost Radar™: Competitive Environment (continued)

- **Innovaccer** is growing its PHM revenue faster than most others in the market. The firm's core competitive advantage remains its ability to be highly modular, interoperable, cost effective, and 100% result oriented. Its PHM platform offers maximum flexibility to incorporate add-on features.
- Allscripts characterizes another popular PHM deployment model. The firm allows health systems to
 consolidate their PHM IT investment to fewer incumbent vendors. Allscripts has a significant
 number of loyal customers that have demonstrated faith it its ability to stratify clinical risk, manage
 care, and measure outcomes at point of care (PoC) via its legacy EMR workflow.
- Another trailblazing PHM IT company is Medeanalytics that excels in PHM analytics in EMR workflow. It stands out for its visionary AI capabilities that normalize disparate patient evidence at PoC and suggests clinical interventions with a very high degree of accuracy and specificity.
- Frost & Sullivan also recognizes pure-play VBC firms that have successfully penetrated the US PHM market with capabilities customized to every episode of value-based care. **Cedar Gate Technologies** is leading that segment of the market.
- **ZeOmega, Health EC, and Lightbeam Health** appear to be best-in-class in their approach to devise and deploy customized PHM plans for payers and providers.



Allscripts

INNOVATION

- Allscripts has transformed its legacy EMR platform into a full-fledged PHM enabler. Its range of modular solutions aids cross-continuum interoperability, delivers harmonized patient analytics, and supports virtual outpatient care, at scale.
- Allscripts aims to organize provider workflows with automated integration of bi-directional patient data (clinical, social, and financial) from disparate HIT systems into its Sunrise EMR, allowing clinicians to make informed decisions from a single platform window (DbMotion).
- The platform uses semantic grouping technology to normalize multiple data formats in DbMotion in near-real time.
 As such, health systems can trigger gaps in care early at an enterprise level without leaving the EMR.
- Allscripts Care Director and CarePort complement DbMotion with pioneering PHM capabilities for outpatient care and post-discharge.

GROWTH

- Allscripts' growth strategy is primarily aimed at its 1000+ incumbent healthcare customers that historically struggled to improve data interoperability, workflow automation, workforce efficiency, and patientprovider engagement within a multi-EMR ecosystem.
- Deployment of the latest clinical standards on an acuity care platform that enables seamless collaboration between surgical teams, nurses, care managers, and social service providers exemplifies how Allscripts champions PHM for high-risk-high-cost patients across the care continuum.
- This approach allows Allscripts to consolidate higher revenue from its incumbent customers that are expanding their IT investment by working with virtual care platforms and connecting them with Allscripts EMRs, resulting in higher than estimated return post-COVID.

FROST PERSPECTIVE

- Frost & Sullivan's research indicates that Allscripts remains one of the top 3 US-based EMR companies that delivers next-generation PHM capabilities. It transforms organizational efficiency and digitizes community care without the need for dedicated third-party PHM engagements.
- In 2020, the company lost revenue by 8%. Hence, a razor-focused approach to progressive PHM capabilities that can be positioned with EMR upgrades, which are pending for existing clients, can help the firm improve its revenue.
- Allscripts should harness the opportunity to optimize payer-provider connectivity and help its customers gain visibility on claims criteria adherence, triggers of denial management, and performance of member-to-payer guidelines with tools that are powered by Al, FHIR, and cloud.

FHIR—Fast Healthcare Interoperability Resource
Source: Frost & Sullivan

Cedar Gate Technologies

INNOVATION

- After the acquisition of ENLI Health Intelligence, Cedar Gate Technologies entered the full-service PHM market.
- Historically, the firm offered enterprise data management, data analytics, and care management services to patients enrolled in various value-based payment plans. With ENLI, it now offers best-in-class care coordination, performance management, and quality benchmarking capabilities to payers, providers, and employers.
- The firm's unique capabilities include integration of risk-specific patient cohorts into EMR workflows to support evidence-based actions and appropriate next steps, including referral to relevant episodes of care, at scale, and on a near real-time basis.
- Another stand-out capability is how the firm helps payers optimize incentive management programs. It allows realtime tracking of health outcomes and benchmarks them against ideal targets at an enterprise and community level.

GROWTH

- The firm targets health systems that increasingly allocate more net patient revenue to quality or risk-based payment plans and aim to reduce outof-pocket costs for members. The objective is to improve patient outcomes at a population level while reducing clinical utilization, eliminating preventable financial expenses, and streamlining operational processes.
- Its Center of Excellence approach to manage chronic conditions and rare diseases helps health systems to serve all high-risk and high-cost patients.
- Another important growth strategy is to combine PHM value propositions for employees (and their families) on behalf of large employers. It allows community health management and provides a level playing field for all payers and providers that are promising to reduce preventable intervention, eliminate unnecessary costs, and offer patient-provider connectivity throughout the year.

FROST PERSPECTIVE

- Frost & Sullivan considers Cedar Gate
 Technologies a distinguished PHM
 company that truly excels in optimizing
 value-based payment plans. Employers
 or ACOs benefit from cross-continuum
 PHM services that help reduce the cost
 of employee health management.
- The firm must continue to innovate in the payer-provider connectivity space.
- Moreover, it should explore more patient-centric HIT modules and double down on its incumbent CRM capabilities to ensure robust patient outreach and support holistic wellness and behavior management initiatives that are increasingly critical subsets of broader chronic condition management (CCM) programs.
- In next 2 to 3 years, the firm would benefit from prioritizing large employers and ACOs that are struggling to manage the rising cost of employee health and to report shared savings.

Cerner

INNOVATION

- Cerner's PHM strategy has transitioned from being EMR workflow-centric to integrated-platform oriented (HealtheIntent). Its PHM suit of solutions is now 100% customizable, seamlessly interoperable (across native and third-party hosting infrastructure), and fully immersive to in-patient, outpatient, and community care systems.
- Cerner is an early mover to integrate CRM into PHM (in collaboration with Salesforce). This innovative approach positions health systems to deliver targeted patient engagement campaigns that improve clinical outcomes and streamline business operations, all at once and at a population level.
- Cerner empowers patients to access a range of wellness and behavioral health tools that promise to deliver therapeutic treatment plans and 1:1 coaching to manage chronic conditions or recover faster post surgery.

GROWTH

- Cerner has performed relatively better during the pandemic against its immediate competitors but still lost revenue by 3% y-o-y from 2019 to 2020.
- As a result, its PHM platform has been truly democratized. Any progressive health system can extend HealtheIntent with add-on features, developed by third-party programmers. Additionally, HealtheIntent is now accessible to nonusers of Cerner EHR.
- Another game-changing growth strategy is Cerner's comprehensive value-based advisory services that allow customers to make the best use of HealtheIntent across clinical, financial, and operational IT systems.
- All of these strategies led to yearly booking of \$1.395 billion in 2020, which met Cerner's expected revenue target that was set pre-COVID in 2019.

FROST PERSPECTIVE

- Frost & Sullivan acknowledges that Cerner's PHM strategy is uniform, global, and all encompassing, resulting in strong growth potential for the next 2 to 3 years.
- Cerner should double down its PHM analytics capability and bridge the gaps observed in clinical decision-making at PoC. HealtheIntent's ability to perform well (e.g., deployment of clinical protocols and quality standards) within disparate acuity care platforms will address the pain point effectively.
- Cerner's PHM solution should incorporate provisions for complex government insurance plans (MA, LTSS) that include patients who truly require cross-continuum healthcare services via a centralized digital platform from their employers or ACOs.
- A fresh approach to support pharmacy benefit management (PBM) firms with digital retail care solutions could also prove to be a valuable PHM strategy.

Health Catalyst

INNOVATION

- Health Catalyst is uniquely positioned in the US PHM market as it aims to optimize incumbent PHM solutions of large health systems.
- Its core data warehouse, analytics, and transformation capabilities help health systems gain unprecedented visibility across clinical, financial, and operational workflows for both at-risk and FFS-based patient populations.
- Its technological sophistication allows it to work seamlessly with other PHM IT partners and highlight gaps in their performance management capabilities that are primarily attributed to data authenticity, accuracy, and visualization.
- Health Catalyst is at the forefront of innovation, building rules engines that effectively calculate per member per month (PMPM) cost/revenue, stratify hierarchical condition category (HCC) risk, and assess opportunities to expand the scope of VBC from in-patient to long-term or home care.

GROWTH

- Health Catalyst acknowledges that too many PHM programs fail due to ineffective management of healthcare data (beyond just patient data) across the care continuum. It attributes the problem to too many PHM platform and services players involved at the healthcare enterprise level. Because healthcare data interoperability standards are not consistently held across major health systems, the involvement of too many HIT participants for one common PHMbased goal becomes unattainable due to lack of centralized visibility of program performance.
- Health Catalyst is growing its PHM business rapidly, bringing all the native and third-party HIT companies under one central PHM data management platform.
- The platform is equipped with modular applications that health systems can leverage based on their affiliation to various VBC programs.

FROST PERSPECTIVE

- Frost & Sullivan considers Health
 Catalyst a critical addition to all PHM
 programs. The modular approach to
 PHM data management and quality
 performance monitoring stands out in
 the fragmented US PHM market.
- Specially, for high-risk high-cost patients in acute care, this firm stands out for its industry-leading clinical insight and patient safety protocols.
- Health Catalyst should be considered by PHM managers that are struggling to improve shared savings, augment quality ranking, or negotiate a better annual capitated fee from payers.
- One area worth considering is how to help patients access transformational PHM data to support their decisions when choosing a payer or provider.
- The employee health management market is another growth opportunity areas, where performance of internal PHM programs has been unsatisfactory for many large global employers.

Health EC

INNOVATION

- Health EC is a boutique PHM company that specializes in data aggregation, normalization, and contextualization for payers and providers.
- It offers transformational health data lake capabilities that capture patient data from disparate sources and store them centrally for processing, which includes clinical risk stratification, predictive health modeling, cost and quality benchmarking, and care management.
- The firm's innovative approach to PHM is characterized by its ability to combine risk indicators from the ACG John Hopkins Model, HCC, and its own risk management algorithms that accurately stratify patients in different homogeneous cohorts and help customers target them by personalized intervention and education.
- Its quality reporting capabilities are NCQA certified, resulting in trustworthy electronic clinical quality measure (eCQM) offerings.

GROWTH

- Health EC's growth strategy is similar to all value-based PHM companies, driving transformational customer results that appear better than most of its peers.
- Since the firm primarily works with USbased ACOs, it supported their goal of optimizing shared savings per member per year. In 2019, Health EC's average shared saving PMPY was \$685, 3-times higher than other ACOs that were not customers.
- Health EC also excels on cognitive quality reporting through data analytics that are pre-built with 500 quality rules and 250 reports. This results in incremental business opportunity from customers who work with other PHM full service providers.
- Health EC's proprietary care management portfolio that integrates SDoH into clients' existing CCM workflows will yield further growth as that becomes critical for optimized HCC coding post-COVID-19.

FROST PERSPECTIVE

- Frost & Sullivan considers Health EC a rising star in the US PHM market.
- We advise the firm to double down on government solutions as CMS is expected to promote comprehensive use of VBC for all insured patients year round.
- The firm might also target patients directly post care to offer custom insights that drive medication adherence and timely follow-up, two important enablers of improved clinical outcomes.
- Health EC should explore opportunities to remain seamlessly interoperable with legacy RCM platforms for holistic HCC coding management. The role of AI in optimizing HCC risk management is paramount in the context of PHM program outcomes.
- Frost & Sullivan recommends Health EC amplify its VBC advisory services with specific tracks for different payment programs.

Innovaccer

INNOVATION

- Innovaccer drives agile innovation with its cloud-based SaaS offerings that cut IT infrastructure expenses for a typical PHM program by up to 70%.
- Its PHM solutions support providers who struggle to convert aggregate patient data into actionable health intelligence at the PoC.
- The firm applies reprogrammable AI algorithms on captured data sets to identify gaps in care, revenue, and operations. This allows it to autogenerate care plans based on patientspecific clinical risks, potential utilization, and their likely impact on organizational quality rankings.
- Innovaccer integrates cloud-based PHM insights for EMR workflows at a network level, so large health systems can make decisions that meet payer-specific guidelines and manage multiple disparate EMRs for inpatient, outpatient, and ambulatory settings.
- This streamlines operational and IT expense cost by a significant margin.

GROWTH

- Innovaccer's growth strategy for PHM is inherent in its mission to help customers implement cloud-based PHM and consolidate their vendor base to fewer top performers.
- This is an important value proposition because a smaller PHM IT supplier base amplifies visibility and control of health systems over their multi-year, multimillion PHM programs.
- As many NGACOs are failing to drive shared savings for reasons that are partly preventable, a streamlined approach to PHM IT procurement and investment can be a game-changer.
- Innovaccer drives superior results with its enterprise-grade PHM offerings whose ancillary modules (referral management, virtual care platform, automated provider risk adjustments, and patient engagement) complement community-level PHM programs.
- As a result, the company is valued at \$1.3 billion after the latest round of funding (series C), worth \$105 million.

FROST PERSPECTIVE

- Frost & Sullivan considers Innovaccer a pioneering PHM IT company that has quickly become a prominent alternative to legacy PHM solution providers.
- One area of consideration is PHM advisory that would ensure renewable PHM business.
- The US VBC market will experience an increase in patient enrollment into various quality and risk-based payment plans. Effective guidance on how PHM can complement this pursuit will help Innovaccer consolidate customers based across ACOs, integrated delivery networks (IDNs), and self-sponsored providers.
- Innovaccer should approach employers that have their own health plans and offer custom PHM services to manage diseases, prevent hospitalizations, and improve the organizational productivity on a national level.

SaaS—Software as a Service Source: Frost & Sullivan

Lightbeam Healthcare

INNOVATION

- Lightbeam Healthcare is a value-based HIT organization that delivers largescale PHM transformation programs for ACOs, IDNs, health plans, and selfinsured providers and employers.
- The firm's innovative customer approach includes aggregation and processing of 13 billion clinical data points to guarantee improved clinical, financial, and operational outcomes at an enterprise level.
- Lightbeam's result-oriented customer contracts and shared-saving-based pricing approach have helped it gain a notable US PHM market position.
- Additionally, in acknowledging that the PHM needs of every health system are different, the company offers both endto-end as well as modular PHM capabilities, such as data analytics, AI in PHM workflow, care management, patient engagement, and quality reporting.

GROWTH

- Lightbeam's growth strategy centers on some of the core US PHM industry pain points: lack of ability to stratify clinical risk of all value-based patients through cross continuum health information exchange (HIE), inefficient electronic document management (EDM) capabilities that support evidencebased care in real time, and shortage of skilled PHM IT resources that are able to optimize the outcomes of PHM programs.
- The firm is poised for transformational growth as it also offers industry-leading VBC advisory services that define the scope, incentive, and risk of VBC contracts for major episodes of care.
- Equipped with actionable insights and targeted PHM IT tools, Lightbeam's customers often report PHM results that are much better than the national average.

FROST PERSPECTIVE

- Frost & Sullivan considers Lightbeam a leading PHM IT and services company in the United States.
- The use of healthcare AI (HCAI) solutions in PHM workflow stands out for creating a way to identify patients that might drive up additional costs tied to preventable clinical utilization.
- This capability in combination with HCAI's ability to optimize provider revenue by delivering accurate HCC coding are enabling Lightbeam to create a niche for its offerings.
- Frost & Sullivan advises Lightbeam pursue an open API initiative and invite third-party developers to build custom solutions around its core solutions.
- The firm might also introduce a PHM marketplace to help partners harness cross-selling or up-selling opportunities in the PHM or VBC markets.

Medeanalytics

INNOVATION

- Medeanalytics offers horizontal PHM analytics capabilities at a healthcare ecosystem level. The company serves its own clients as well as those of its PHM competitors in the United States.
- Concerning the need for EMR-agnostic data management capabilities that successfully prioritize clinical interventions for high-risk-high-cost patient populations under progressive VBC contracts, Medeanalytics remains the preferred choice for ACOs, payerproviders, and legacy PHM IT vendors.
- Its built-in analytics expedite utilization tracking, highlight gaps in claims management, and facilitate payerprovider connectivity to deliver a 360degree view (EMPI) of patients' payer mix, eligibility, charges, and next steps. These features allow providers to address their PHM needs (early intervention and targeted campaigns to reduce cost and utilization) at an enterprise level.

GROWTH

- Medeanalytics is a mature HIT company that has incorporated all nextgeneration analytics technologies data visualization, cognitive root-cause analysis, and predictive forecasting—to deliver on its PHM promises
- As a result, legacy EMR, RCM, and PHM vendors along with large providers and payers engage with this firm to bolster their incumbent analytics capabilities.
- Medeanalytics' tools are 100% modular with open provisions for API configurability. The SaaS-based platform is used in various complex care settings in near real time to drive bi-directional care management.
- Whether the goal is to measure quality performance, benchmark patient outcomes, or quantify gaps in care, Medeanalytics reported results that are superior to those of most others in the PHM sector.

FROST PERSPECTIVE

- Frost & Sullivan acknowledges that Medeanalytics is a leading data analytics company for PHM programs under VBC. As a next step, the firm needs to perform due diligence on the core data management (data aggregation, analytics, and delivery) needs of providers that work closely with connected care firms (medical device companies with integrated IT solutions) as most of them have lacked transformational data processing capabilities.
- This is a relevant growth opportunity as large IDNs and ACOs are investing in a range of virtual care platforms to build digital command centers for centralized decision making and automated workforce management. Medeanalytics should target them and to become their single source of truth for all data management needs.
- It can also invest in AI further to offer conversational analytics on devices.

Optum

INNOVATION

- Optum leads the US PHM market. Its range of analytics, RCM, patient engagement, and care coordination solutions cater to 50% of the US patient population, 200,000 providers, and 9 out of top 10 payers in the country.
- Easy accessibility to large volumes of patient data supported Optum's goal to deploy next-generation AI and ML capabilities into its PHM workflow to identify gaps in care early and trigger evidence-based actions (clinical, financial, or operational) at scale and at an enterprise level.
- Each member of Optum's expanded PHM IT network is offered personalized insight, clinical-grade tools, and roundthe clock care – all via a fully interoperable PaaS capability so that the overarching objective of improved community health is achieved, quantified, and reported.

GROWTH

- Optum's growth strategy is fuelled by its Center of Excellence (CoE) approach to addressing chronic and rare diseases.
- Optum targets large population cohorts that are susceptible to different disease profiles and renders a combination of clinical risk stratification, data analytics, care management, and quality reporting solutions for precise PHM on behalf of payers and providers.
- The company deploys dedicated care coaches who work closely with patients and support their goals to reverse chronic conditions, prevent readmission, or aid post-surgery recovery.
- Optum will incorporate SDoH into its legacy PHM workflow to improve the accuracy of its care management program beginning in 2022. This will support its position as a frontrunner for all social-centric PHM projects.

FROST PERSPECTIVE

- Frost & Sullivan expects Optum to remain a PHM market leader through 2025.
- One growth area worth considering is digital therapeutics (DTx), a clinical-grade software that HCPs prescribe, patients use, and payers reimburse.
- This highly regulated software market has potential to drive measurable health improvements for patients at the community level. Frost & Sullivan defines it as PHM 2.0.
- Since Optum has access to 50% of US patient data and has already deployed thousands of care coaches to help improve patient outcomes, it should invest further to build prescriptionsoftware solutions for its CoE.
- Only a few FDA-approved DTx solutions exist in the United States. Optum can take advantage of its high R&D investment capacity and sheer scale to be the next FDA-approved DTx solution provider and champion PHM 2.0

Philips

INNOVATION

- Philips pioneers PHM solutions that combine in-patient care analytics and cross-continuum care management, supported by best-in-class virtual care enablers. Its PHM strategy centers the need to coordinate care from hospital to home, with a range of solutions that propel value-based care at a patient, population, and community level.
- Its care analytics solutions stratify patient risk at PoC and integrate key PHM program insights on various clinical workflows, such as EMR, CDSS, and telehealth—at scale.
- Its virtual care enablers support continual patient—provider engagement and drive real-time capture of patient data from disparate health systems, including native and third-party RPM devices.
- Harmonizing patient evidence from connected devices and IoMT enablers helps providers intervene early with corrective measures and achieve the desired outcomes of shared savings and improved quality ranking.

GROWTH

- Philips has a strong footprint across all major US-based providers—most of which are aggressively adopting VBC payment frameworks and thereby seek enterprise-grade PHM capabilities that can manage large volumes of sensitive patient information at scale and in nearreal time. Philips is the preferred choice of many for its corporate excellence, technical compatibility, and superior customer support.
- The firm's PHM solutions drive growth for its entire connected care portfolio, which increased revenue by 19 to 22% during 2020 (EUR 5.56 billion) and bolstered total revenue by 0-3% in 2020 as against 2019 revenue.
- Strong PHM growth also stems from its end-to-end capabilities (advisory, IT, managed care) that help large ACOs consolidate multi-year PHM programs to fewer vendors. Its bundling of RPM and PHM into one value proposition will yield positive results in the context of care management post COVID-19.

FROST PERSPECTIVE

- Frost & Sullivan positions Philips as one of the top 3 full-service PHM companies in the United States today. The firm's ability to incorporate global best practices into its incumbent PHM portfolio helps US-based hospitals manage care across the care continuum.
- One area of consideration for Philips should be payer-provider-medical device connectivity. The 3-way engagement would allow key stakeholders to capture evidence of gaps in clinical intervention and financial results when it matters most.
- Philips should also encourage cloudbased deployment of end-to-end PHM solutions to help its customers drive VBC initiatives cost effectively.
- Beyond providers, self-sponsored employers should be a preferred customer group as they are expected to invest in PHM to streamline the rising cost of employee health management.

ZeOmega

INNOVATION

- ZeOmega is a pure-play PHM company that offers the industry-exclusive payerprovider connectivity platform Ziva.
- Ziva is designed to support provider enrollment to various complex and value-based payment tracks. It incorporates modular tools that aid cross continuum HIE, integrated care management, and real-time reporting of quality performance through API integration and seamless ingestation of popular data formats.
- Ziva has gained significant acceptance across ACOs, health plans, payerproviders, and health systems due to its easy configurability, progressive rules engine, and built-in templates for multispecialty care plans.
- As a result, payer-provider communication can be improved at a network level and gaps in member management are identified.

GROWTH

- ZeOmega's growth strategy is centered on its approach to address the compliance and cost management needs of every patient that is served by either commercial or government health plans in the United States.
- Its dedicated tools (programmable AI, customizable interoperability solutions, pre-determined care management standards) and services help customers attribute higher patient revenue to quality or risk-based payment models.
- The company supports improved consumer engagement and 2-way payer-provider communication to aid holistic PHM at a community level.
- ZeOmega's highly experienced managed care and advisory team optimizes its client engagement outcomes through flagship Ziva certification initiatives. This results in the firm's high visibility and viability across most US states.

FROST PERSPECTIVE

- Frost & Sullivan recognizes ZeOmega as a leading US PHM company that is positioned uniquely at the intersection of payer-provider IT relationships.
- Its scope of modular platform capabilities in combination with targeted consulting and troubleshooting services allow a wide range of healthcare organizations to conceptualize, deploy, and maintain large-scale PHM programs.
- ZeOmega's PHM solutions can be implemented relatively quicker and at a lower cost than solutions by its major competitors. These benefits allow the firm to sustain its strong growth momentum into the post-COVID-19 era.
- Ziva cloud (security management, full service admin governance, and risk management services) will be an important competitive advantage as PHM 2.0 will involve patients' response to and engagement with both payers and providers.

FROST & SULLIVAN



Strategic Insights

Strategic Insights

1

The United States healthcare landscape is populated by various popular models of PHM program deployment, including some that demonstrate end-to-end capabilities whereas others include pure-play technologies that can transform an existing PHM program. Large health systems have historically preferred the former, yet they are increasingly favoring the latter as many of their existing programs have failed to yield the desired outcomes—especially when high-frequency-high-cost patients are considered in acute care settings.

2

The most profound and high impact PHM strategy remains the one that expands its scope across the care continuum and merges with virtual care enablers that reduce patients' out-of-pocket costs while improving revenue, shared savings, and quality rankings for the providers.



PHM revenue growth will be primarily driven by commercial payers, payer-providers, and self-sponsored employers that are commissioning a wide range of IT and health services to improve patient health at a community level. Some of these programs will be driven by prescription-grade digital therapeutics solutions that guarantee improved patient outcomes at scale and propel the development of PHM 2.0.



Significance of Being on the Frost Radar™

Companies plotted on the Frost Radar™ are the leaders in the industry for growth, innovation, or both. They are instrumental in advancing the industry into the future.

GROWTH POTENTIAL

Your organization has significant future growth potential, which makes it a Company to Action.

BEST PRACTICES

Your organization is well positioned to shape Growth Pipeline™ best practices in your industry.

COMPETITIVE INTENSITY

Your organization is one of the key drivers of competitive intensity in the growth environment.

CUSTOMER VALUE

Your organization has demonstrated the ability to significantly enhance its customer value proposition.

PARTNER POTENTIAL

Your organization is top of mind for customers, investors, value chain partners, and future talent as a significant value provider.

Frost Radar™ Empowers the CEO's Growth Team

STRATEGIC IMPERATIVE

- Growth is increasingly difficult to achieve.
- Competitive intensity is high.
- More collaboration, teamwork, and focus are needed.
- The growth environment is complex.

LEVERAGING THE FROST RADAR™

- The Growth Team has the tools needed to foster a collaborative environment among the entire management team to drive best practices.
- The Growth Team has a measurement platform to assess future growth potential.
- The Growth Team has the ability to support the CEO with a powerful Growth Pipeline™.

NEXT STEPS

- Growth Pipeline Audit™
- Growth Pipeline as a Service™
- Growth Pipeline™ Dialogue with Team Frost

Frost Radar™ Empowers Investors

STRATEGIC IMPERATIVE

- Deal flow is low and competition is high.
- Due diligence is hampered by industry complexity.
- Portfolio management is not effective.

LEVERAGING THE FROST RADAR™

- Investors can focus on future growth potential by creating a powerful pipeline of Companies to Action for high-potential investments.
- Investors can perform due diligence that improves accuracy and accelerates the deal process.
- Investors can realize the maximum internal rate of return and ensure long-term success for shareholders
- Investors can continually benchmark performance with best practices for optimal portfolio management.

NEXT STEPS

- Growth Pipeline™ Dialogue
- Opportunity Universe Workshop
- Growth Pipeline Audit™ as Mandated Due Diligence

Frost Radar™ Empowers Customers

STRATEGIC IMPERATIVE

- Solutions are increasingly complex and have longterm implications.
- Vendor solutions can be confusing.
- Vendor volatility adds to the uncertainty.

LEVERAGING THE FROST RADAR™

- Customers have an analytical framework to benchmark potential vendors and identify partners that will provide powerful, longterm solutions.
- Customers can evaluate the most innovative solutions and understand how different solutions would meet their needs.
- Customers gain a long-term perspective on vendor partnerships.

NEXT STEPS

- Growth Pipeline™ Dialogue
- Growth Pipeline™
 Diagnostic
- Frost Radar™
 Benchmarking System

Frost Radar™ Empowers the Board of Directors

STRATEGIC IMPERATIVE

- Growth is increasingly difficult; CEOs require guidance.
- The Growth Environment requires complex navigational skills.
- The customer value chain is changing.

LEVERAGING THE FROST RADAR™

- The Board of Directors has a unique measurement system to ensure oversight of the company's long-term success.
- The Board of Directors has a discussion platform that centers on the driving issues, benchmarks, and best practices that will protect shareholder investment.
- The Board of Directors can ensure skillful mentoring, support, and governance of the CEO to maximize future growth potential.

NEXT STEPS

- Growth Pipeline Audit™
- Growth Pipeline as a Service™



Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

VERTICAL AXIS

Growth Index (GI) is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market, competitor, and end-user focused sales and marketing strategies.

GROWTH INDEX ELEMENTS

GI1: MARKET SHARE (PREVIOUS 3 YEARS)

This is a comparison of a company's market share relative to its competitors in a given market space for the previous 3 years.

GI2: REVENUE GROWTH (PREVIOUS 3 YEARS)

This is a look at a company's revenue growth rate for the previous 3 years in the market/industry/category that forms the context for the given Frost Radar $^{\text{M}}$.

GI3: GROWTH PIPELINE™

This is an evaluation of the strength and leverage of a company's growth pipelineTM system to continuously capture, analyze, and prioritize its universe of growth opportunities.

GI4: VISION AND STRATEGY

This is an assessment of how well a company's growth strategy is aligned with its vision. Are the investments that a company is making in new products and markets consistent with the stated vision?

GI5: SALES AND MARKETING

• This is a measure of the effectiveness of a company's sales and marketing efforts in helping it drive demand and achieve its growth objectives.

Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

HORIZONTAL AXIS

Innovation Index (II) is a measure of a company's ability to develop products/services/solutions (with a clear understanding of disruptive Mega Trends) that are globally applicable, are able to evolve and expand to serve multiple markets, and are aligned to customers' changing needs.

INNOVATION INDEX ELEMENTS

II1: INNOVATION SCALABILITY

This determines whether an organization's innovations are globally scalable and applicable in both developing and mature markets, and also in adjacent and non-adjacent industry verticals.

II2: RESEARCH AND DEVELOPMENT

This is a measure of the efficacy of a company's R&D strategy, as determined by the size of its R&D investment and how it feeds the innovation pipeline.

II3: PRODUCT PORTFOLIO

This is a measure of a company's product portfolio, focusing on the relative contribution of new products to its annual revenue.

II4: MEGA TRENDS LEVERAGE

This is an assessment of a company's proactive leverage of evolving, long-term opportunities and new business models, as the foundation of its innovation pipeline. An explanation of Mega Trends can be found here.

II5: CUSTOMER ALIGNMENT

This evaluates the applicability of a company's products/services/solutions to current and potential customers, as well as how its innovation strategy is influenced by evolving customer needs.

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