

ORACLE ENTERPRISE HEALTHCARE ANALYTICS



ORACLE® HEALTH SCIENCES

Now more than ever, healthcare organizations need the ability to make better-informed decisions that will drive improved clinical care and operational efficiency. Oracle Enterprise Healthcare Analytics solutions enable healthcare providers to gain a new level of data transparency and to obtain the insights that improve patient safety, care quality, cost efficiency, and overall enterprise performance.

Engineered specifically for healthcare providers, Oracle Enterprise Healthcare Analytics integrates a proven data warehousing platform with pre-built analytics solutions, for superior decision-making and efficiency:

- **Oracle Healthcare Data Warehouse Foundation** serves as a single repository for all of a provider's data, even from disparate systems, offering a comprehensive and integrated view across the enterprise.
- **Oracle Healthcare Operating Room Analytics** provides organizations with the timely information required to increase operating room productivity and improve resource allocation.
- **Oracle Healthcare Provider Supply Chain Analytics** enables providers to make more informed supply-chain decisions, improving operational efficiencies and outcomes for care delivery.

Better Decisions, Improved Efficiency and Care

As the healthcare environment continues to evolve in countries around the world, healthcare providers face an increasingly dynamic and complex set of challenges. Healthcare industry cost, quality, and access issues are rapidly reaching crisis proportions that are no longer sustainable. Chief among these are issues related to healthcare reform and governmental regulations, including accountable care, quality initiatives and meaningful use of information technology; thus, new and more powerful solutions are needed.

In response to these urgent needs, Oracle has developed Enterprise Healthcare Analytics, a complete set of advanced data warehousing and analytics solutions specific to healthcare that will empower organizations to not only meet these challenges but also to transform themselves. Insights that can lead toward healthcare and business transformations, previously infeasible, are now within reach.

Across the Enterprise, a Need for Better Information

You know it better than anyone. The need for timely, actionable data cuts across the entire enterprise—and it starts at the top:

- **For CEOs, CFOs, and COOs**, the ability to rapidly make information-based strategic decisions is paramount. All too often, they either have insufficient data or they're drowning in it—yet this data was difficult and costly to obtain, and it failed to adequately provide answers to their most important questions. Today, these executives need more efficient means of capturing revenue and tracking reimbursement, particularly in light of incentives and penalties for providers' meaningful use of health information technology (HIT). Further, they are seeking ways to improve clinical quality, reduce costs, optimize staffing and resource levels, and accelerate new advances at the point of care—all while enhancing their competitive position and differentiating the organization's offering.

Oracle Enterprise Healthcare Analytics includes advanced data warehousing and analytics solutions that provide detailed, holistic, and integrated views of the healthcare provider enterprise.



- **CIOs**, meanwhile, are under constant pressure from their executives to provide this actionable information in a timely and cost-efficient manner. Reducing the cost and complexity of supporting the infrastructure and undertaking new development is key to the organization's success, as is accelerating the timeline for these new developments and their time to value. Further, with increased regulations from governmental agencies and industry or consumer groups, compliance has become a significant challenge.

- **CMIOs** need to establish evidence-based practices and standards of care as reimbursement is increasingly tethered to outcomes. They are also dealing with issues related to Comparative Effectiveness Research, quality initiatives, and standards of care delivery. These pressures require the ability to more accurately and efficiently measure and link the care process and outcomes, and to present this data to stakeholders, including executives and protocol/standards committees. Meanwhile, they are tasked with reducing medical errors, enhancing patient safety, and ensuring that delivery of care does not suffer as process improvements are implemented.

Regulatory compliance is another constant challenge, particularly due to the manual and tedious nature of data-gathering.

Given these myriad challenges, it has never been more critical for managers to more quickly—and less expensively—obtain actionable information from data obtained

from within the enterprise and externally, and to make faster and better-informed decisions. This requires robust, proven solutions that can deliver significant, measurable impact across the executive, clinical, research, and operations domains.

Oracle Enterprise Healthcare Analytics: Integrated Solutions

Oracle Enterprise Healthcare Analytics includes advanced data warehousing and analytics solutions that provide detailed, holistic, and integrated views of the healthcare provider enterprise. Built from the ground up exclusively for the healthcare industry, these solutions enable an organization to collect data from various internal and external source systems—such as electronic health records, clinical departmental systems, patient accounting, back office, and research—and place it into a single repository, eliminating disconnected “silos” of information. Analytics solutions are then utilized to obtain operational, financial, and clinical performance information and knowledge.

This enables organizations to much more quickly gather critical data—even if from disparate sources—and then analyze it, obtain insights from it, and operationalize it, for higher efficiencies across the enterprise, from the operating room to the supply chain. For perhaps the first time, executives are provided with a holistic view of their entire enterprise, enabling a new generation of insights that can change an organization's long-term trajectory.

Improving Costs, Efficiencies, and Outcomes

The results from this newfound speed and agility can be profound, greatly enhancing an organization's ability to achieve stakeholder support and quality-measures accountability for improvements in patient care, service line effectiveness, and profitability. Now, executives and managers can make more informed decisions that improve cost savings, operational efficiencies, and outcomes for care delivery. Providers are empowered to deliver on the promise of Comparative Effectiveness Research, enabling them to mine a variety of data sources to conduct care and outcome reviews, to disseminate analysis results in a more usable form, and to identify gaps between existing medical research and the needs of the clinical practice. Also, management can more quickly identify non-performing sectors and processes, and focus resources on the most critical needs. Finally, organizations can get out in front of regulatory reform—rather than constantly trying to catch up.

Standardized Formats and Ready-Made Tools

Data is delivered in standardized, automated formats, so once Oracle Enterprise Healthcare Analytics solutions are operational, organizations can more easily prioritize, productize, and streamline their data analysis efforts. Out-of-the box reports can be utilized for immediate information aggregation; Oracle's ready-made, enterprise-grade tools can be accessed to build analytics for



any domain without costly development; and with economies of scale, the average cost per application of customized analysis can be reduced.

Next, we'll present the components of the Oracle Enterprise Healthcare Analytics products:

- Oracle Healthcare Data Warehouse Foundation
- Oracle Healthcare Operating Room Analytics
- Oracle Healthcare Provider Supply Chain Analytics

Oracle Healthcare Data Warehouse Foundation

As the cornerstone of Oracle Enterprise Healthcare Analytics, Oracle Healthcare Data Warehouse Foundation is a comprehensive and integrated data model for all of a provider's data—and a source for improved decision-making and clinical performance throughout the organization, moving from data to information to actionable knowledge. This data model, built specifically for healthcare providers, includes an expanding list of more than 1,000 entities and 12,000 attributes, spanning the clinical, financial, operational, and research domains. Now, providers can obtain the information that is essential for identifying best practices and optimizing enterprise performance, for improving quality, and supporting the establishment of evidence-based practices. Further, the Oracle Healthcare Data Warehouse Foundation can substantially

lower the risk and total cost of ownership typically associated with a provider data warehouse.

As its name implies, this productized solution acts as a foundation upon which providers can deploy pre-built business intelligence, analytic, data mining, and performance-management applications from Oracle. In addition, analytic applications from Oracle's rapidly expanding partner ecosystem include hospital infection control, medication-related adverse events, quality and outcomes reporting, patient registries, revenue cycle, and cost-allocation analytics and cohort identification. Since the Oracle Healthcare Data Warehouse Foundation was specifically engineered for ease of use for analytic application developers, it can easily be used to build customized applications for each provider's unique environment. Either way, starting with the Oracle Healthcare Data Warehouse Foundation as a foundation will dramatically reduce time-to-value and development costs, and help to realize the full value of Oracle's analytics solutions.

Leverage the Advantages of Oracle's Experience

Oracle has two decades of experience with many of the world's largest enterprise-class data warehouses, and has built clinical data repositories holding vast amounts of patient records globally. This experience, combined with the expertise of physicians, nurses, allied health professionals, and medical informaticists, has enabled Oracle to create a data model engineered from the ground up specifically for healthcare providers.

By adopting Oracle Healthcare Data Warehouse Foundation, providers can leverage Oracle's extensive data and information management expertise and support capabilities—along with the ability of Oracle and its partners to deliver new data integration and analytics products.

Oracle Healthcare Operating Room Analytics

For hospital organizations, the operating room has a singular impact on profitability, reputation in the community—and the lives of patients and their families. Oracle Healthcare Operating Room Analytics is a comprehensive solution that enables these organizations to better understand and improve operating room functions at both the facility and enterprise levels, by providing the perioperative team with secure, timely, and accurate information. Oracle Healthcare Operating Room Analytics provides a 360-degree view of the Operating Room, which makes it possible for staff, managers, and executives to gain increased visibility into their operational data—enabling proactive performance management and the ability to make better-informed business and medical decisions, increase perioperative productivity, increase operating room efficiency, and improve resource allocation. With faster, more accurate access to an integrated view of analytics data, teams can review and manage performance against targets and benchmarks in near real-time, and make improvements that positively impact costs, outcomes, and satisfaction.

Oracle Healthcare Data Warehouse Foundation is a comprehensive and integrated data model for all of a provider's data—and a source for improved decision making and clinical performance throughout the organization, moving from data to information to actionable knowledge.

25 Role-Based Dashboards— Plus Custom Reports

Managers across the enterprise are able to obtain the data they need by leveraging more than 125 pre-built, role-based reports; these user-friendly dashboards and reports are delivered out of the box for operating room directors, surgery and anesthesia teams, Chiefs of Nursing, Surgery, and Anesthesia, and for CFOs and COOs as well. Oracle Operating Room Analytics also offers the ability to create ad hoc custom reports and views based on pre-defined Key Performance Indicators (KPIs). Its powerful analytic capabilities can track utilization and assist in the identification of bottlenecks and inefficiencies, providing valuable insights for accurate planning. The efficiency measures tracked include scheduling accuracy, cancellations, delays, surgeon on-time arrival, procedure durations, and many more.

Oracle Healthcare Provider Supply Chain Analytics

At a time when supply expense can be as high as 35–45% of a health system's total operating costs—placing pressure on margin and profitability in an already competitive, resource-constrained environment—the performance of a provider's supply chain is a key success factor. Recalled products, just-in-time delivery, and the assurance that products are available at the right place and right time all require KPIs and insight throughout the process.

Oracle Healthcare Provider Supply Chain Analytics helps providers to more accurately measure and manage the end-to-end processes of this critical function, enabling better-informed decisions that improve profitability, operational efficiencies, and outcomes for care delivery. Management is now able to improve contract usage, compliance, and diversity spend reporting, and identify quality improvements that increase the efficiency of internal processes across the organization.

Reports and metrics are refreshed as data is renewed, to identify immediate insights; and with accelerated access and transparency to an integrated analytics view, teams from across the enterprise can rapidly gain accurate insights into key business problems—and resolve them more quickly. At the same time, organizations will be able to decrease manual efforts, freeing analysts to work on value-added projects.

Enterprise-Capable

Oracle Healthcare Provider Supply Chain Analytics promotes improved safety and care outcomes, standardization, and best practices, and was engineered with Oracle's deep industry and technical expertise. This enterprise-capable solution integrates with other Oracle products for measurement across the organization, and delivers superior end-user experience and interaction.



A Value-Added Partnership with Oracle

Oracle brings unmatched resources and experience to the global challenge of improving the use of healthcare data. We offer our partners the benefit of our targeted investments through collaborative relationship models; the open, standards-based products that drive transformation and innovation; and a commitment to a long-term enterprise roadmap designed to realize vision and value.

We're Ready to Help.

The path to superior decision-making begins by selecting an expert partner with proven, best-in-class solutions and experience. With extensive technical and industry experience, Oracle's Global Health Sciences Business Unit stands ready to help your organization begin its transformation.

CONTACT US

To learn more:

Join us for a web-based overview on achieving better business insights with Oracle Enterprise Healthcare Analytics. See www.oracle.com/us/industries/healthcare

call **1-800-633-0738** to speak with an Oracle representative.

Outside North America, visit oracle.com/corporate/contact to find the phone number for your local Oracle office.

