ORACLE

Oracle Modern Best Practice for Healthcare

> “Every penny spent on administration is one that can’t be spent on patient care.”

Steve Cox, Hector Rodriguez, Anne-Marie Vine-Lott, Michael Walker, John Harvey, Mike Andrus and others
With special contribution from Anthony Kulesza

About the authors

Steve Cox

Steve Cox is Group Vice President for ERP EPM Product Marketing at Oracle. He joined Oracle in 1997. Prior to his current role, he held various leadership positions within Oracle product marketing, consulting, and development. Steve is an Oracle thought leader on business processes and how the convergence of cloud, mobile, analytics, social, big data, IoT, AI/machine learning, blockchain and augmented/virtual reality will fundamentally change the way we work.

Steve holds a master's degree in business administration from the University of Bath. He is the author of two Oracle books *Oracle Modern Best Practice Explained* and *Oracle Modern Best Practice—Predicted* and is currently working on further books in the series. He has been widely published or quoted in leading finance and technology publications, including *Forbes*, *FEI Daily*, *TechTarget*, *Diginomica*, and others.

Steve Cox, Group Vice President,
Oracle Cloud Business Group

Hector Rodriguez

Hector Rodriguez is Oracle's Healthcare Industry Executive Director. Hector is a healthcare solution strategist and technologist and has over 25 years of experience in the healthcare industry with provider, health plan, and life sciences organizations. His work is aligned with a covered entity's "Triple/Quadruple Aim" objectives to improve the patient and caregiver experience, improve population health, and reduce costs. His work focuses on leveraging modern technology as an innovative and transformative catalyst to accelerate and support a healthcare organization's ability to optimize their "care-centric" supply chain coupled with their human capital to provide total health and wellness solutions and services within their community.

Hector works extensively with industry and academic groups including WEDI-SNIP, HL/7, AHIP, HIMSS, HITRUST, and CAQH. He is a founding member of the HITRUST Business Associate Council and a health industry and cybersecurity curriculum advisor for the University of Connecticut and Seton Hall University. Hector is a notable speaker at corporate executive briefing centers, partner conferences, and HIMSS meetings on topics such as "Cybersecurity and the Trusted Healthcare Cloud," "Blockchain in Healthcare," and "Healthcare Digital Transformation and Operational Excellence." Hector began his career in 1982 as a software engineer at Bell Research Laboratories and has been in the IT business for over 35 years. Hector has an MBA in management finance and entrepreneurship, and a bachelor's degree in computer science from Rutgers University.

Hector Rodriguez, Industry Executive Director,
Healthcare and Life Sciences, NAA Value and Strategy SE Value,
Oracle

Anne-Marie Vine-Lott

Anne-Marie Vine-Lott is a qualified accountant with extensive experience across the private, public and charitable sectors in senior roles including Finance Director of Berkshire Healthcare NHS FT, and Head of Performance Reporting for HM Treasury. She joined Oracle in 2018, initially working across the public sector on strategic innovation and then bringing her insight from the NHS to the role of UK Healthcare Director.

Anne-Marie has a strong background in innovation and transformational change through the identification, development and delivery of digital solutions that bring improved outcomes and sustainable efficiencies. She is passionate about aligning health and social care, and ensuring that resources are focused on frontline patient care and preventative interventions.

Ane-Marie Vine-Lott, NHS Key Account Director, EMEA KAD,
Oracle

Anthony Kulesza

Anthony Kulesza manages Finance's Strategic and Transformation portfolios at Blue Shield of California. He is also coordinator of the Oracle Center of Excellence, which defines a shared vision of BSC's multipillar Oracle platform. Within these roles Anthony applies his passion to achieve efficiency through process improvement and systems engineering.

Anthony Kulesza, Sr. Program Manager,
Strategic Portfolio Management and Finance Transformation,
Blue Shield Of California

Michael Walker

Mike is a recognized expert with over 25 years of experience across the entire health sciences value chain. He has worked with organizations that span clinical research, medical devices, biotech, big pharma, distribution as well as healthcare payers, providers, and IDNs.

Mike has held roles in advisory consulting, operations, supply chain, product strategy, sales, and marketing. He has deep knowledge in clinical and commercial operations, value-based care, population health, regulatory compliance, precision medicine, healthcare IT as well as industry and quality frameworks.

His perspectives have been published in *Forbes*, the *Wall Street Journal*, and *Modern Healthcare* on topics that span elder care readiness to emerging technology that improves outcomes and access to care. Mike holds Six Sigma and CPIM certifications and earned a Bachelor of Science degree in computer science and mathematics from the University of Pennsylvania.

Prior to joining Oracle in 2016, Mike was a management consultant. He now leads the Oracle industry strategy team for global healthcare and life sciences.

Michael Walker, Healthcare and Life Sciences Industry Lead,
GISG - Govt, Education and Healthcare,
Oracle

John Harvey

John is a conscientious leader with over 20 years of experience in consulting, business development, and program management with top-tier organizations. He specializes in the delivery of business process transformation and technology solutions necessary to improve organizational performance within the healthcare provider market.

John is an expert in healthcare supply chain operations, strategy, and technology with a proven track record achieving results while leading strategic, functional, and technical teams. He is effective at leading teams through organizational transformation, system implementation, integration, and related business processes critical to program success. John is a strategic leader who develops positive relationships with all stakeholders to drive opportunities and increase efficiency.

John Harvey, Industry Executive Director,
Healthcare SCM, NAA Value and Strategy SE Value,
Oracle

Mike Andrus

As VP Human Capital Management Transformation, Mike partners with key healthcare and Fortune 500 customers to share employee experience and technology strategies, leading practices and research. Prior to joining Oracle in 2016, Mike spent ten years leading HR operations at one of the largest health systems in the United States, as well as ten years in progressive finance roles at a global telecom company.

Mike has led large enterprisewide organization and process design and deployment initiatives for technology strategy development, vendor contract management, continuous improvement programs, change management, and stakeholder governance.

Mike shares thought leadership ideas and healthcare customer success stories in conference sessions, webcasts, and publications including *Becker's Hospital Review*, *Modern Healthcare*, *HIMSS*, *CHIME*, and *SHRM*.

Mike Andrus, Vice President,
HCM Transformation, NAA - HCM Transformation,
Oracle

Contributing Authors

Peter Williams, Simon Instone, Raj Modi, Stephanie Foster, Mary Kilmer, Chinam Kry, Yih-Wen Lin, Lynne Sampson, Lisa Schwartz, Jeff Stiles, Jennifer Toomey, and Michael Richter.

Table of contents

Foreword

Shortly after completing **Oracle Modern Best Practice—Predicted** in 2019, I was asked, **"Can *we work together on an ebook covering how business processes need to change in the healthcare industry?*"**

My fellow thought leaders, Chris Gibson and Hector Rodriguez, had read **Modern Best Practice—Predicted** and were keen to create content that addressed business priorities in healthcare, the industry sector on which we all depend. The (deliberately) provocative subtitle we agreed on says it all:

"Every penny spent on administration is one that can't be spent on patient care."

At a time when technology-driven advances in medical science arrive almost daily, the back-office functions in too many healthcare institutions still struggle to improve productivity, extract insights, truly engage employees, and achieve operational excellence. This challenge is due to the cement-hardened processes and technical debt caused by using software designed 20 years ago.

This book is based on the knowledge gained working with thousands of healthcare customers around the world. In it, we take a pragmatic approach to show the process changes needed in some key business areas and to discuss the technologies that will make a step-change in business performance for the healthcare sector, now and in the near future.

Steve Cox, February 2020

Introduction

Our goal in this very book is to stimulate meaningful discussion about the state of healthcare and how healthcare organizations can simplify, unify, and transform enterprise operations to make meaningful progress. We cannot predict the future of healthcare because there are simply too many variables. But we can show how technology can revolutionize the back-office administration functions.

Many of the world's leading healthcare organizations have modernized and digitized their Electronic Medical Records (EMR). Now it's time to focus on driving and aligning operational excellence with care transformation.

Organizations such as Adventist Health, Providence St Joseph's Health, Cottage Health, Emblem Health, Highmark, Blue Shield of California, Blue Shield Blue Cross, the NHS foundation trusts of University Hospital Southampton and University Hospitals of Morecambe Bay in the U.K., Sejong Hospital in South Korea, and many others have leveraged modern technology and data to enable transformative innovation and continuous improvement across their entire organizations. Results have included overall cost savings, process optimization, and clinical improvements.

In this book we'll explore how healthcare organizations can modernize, transform, and align their finance, supply chain, and human capital processes to optimize their ability to deliver exceptional and affordable care while achieving the healthcare industry's "***Quadruple Aim***" to reduce per capita cost, improve the patient experience, improve population health, and increase process efficiencies and clinician satisfaction.

Hector Rodriguez, Michael Walker, February 2020

Chapter 1

On operational efficiency

As the needs of the world's population evolve—even though it may be in fits and starts—healthcare will evolve in parallel. This evolution in some areas may resemble a revolution as we endeavor to engineer a shift from cure to prevention, adopt more and more remote healthcare practices, and move away from hospitals as purely fixed brick-and-mortar entities to a *"bricks and clicks"* model that may, in some ways, resemble the best of the retail industry.

At the same time, we need to bear in mind that **healthcare is above all a vocation, a higher calling**—because those we serve are those in need.

It is imperative that we help the industry as a whole improve processes and become future-ready. Doing so releases funds from administrative budgets to dedicate to improved healthcare outcomes. It also frees those on the front lines from time-consuming administrative tasks that hinder care.

> The cost of providing healthcare has risen to an unsustainable level, fueled by an aging population that needs to be treated for longer, evolving customer expectations, and escalating drug prices. As these costs increase, healthcare organizations are also facing a decline in reimbursement, meaning they have to provide the best levels of care while still reducing expenditures to remain financially viable."
>
> —Oracle Healthcare Industry Viewpoint

Read the ebook: oracle.com/webfolder/assets/ebook/health-science-industry-viewpoints

In April 2017, McKinsey* identified *rigorous process management* as one of the common characteristics of successful care models. To quote, ***"this includes the standardization of clinical and operational processes (for example patient self-management or remote monitoring) and robust performance management, and robust performance management."*** But standardization is not enough. Without the flexibility needed to meet a constantly evolving healthcare landscape, it's all too easy to solve yesterday's problems and have no answers to today's.

We believe that when it comes to operational processes, operational excellence means that standardization **must** go hand-in-hand with optimization and continuous innovation.

In the simplest of terms, the healthcare back office needs to run **always up-to-date processes on always up-to-date technology**.

* Read the article: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/new-models-of-healthcare

What is Operational Excellence?

The Institute for Operational Excellence defines the keys to success:

- Start with the right definition, one that everyone, at all levels of the operation, can understand and know how to achieve.
- Enable each employee to see that continuous improvement efforts are not about eliminating waste or lowering cost.
- The end goal is to have operations be critical to creating and delivering care services and products that healthcare customers want in order to establish perpetual high-quality outcomes and growth.

> ...Every employee can see the flow of value to the healthcare customer, and fix that flow before it breaks down...
>
> —Institute for Operational Excellence

Operational Excellence

Sources: https://instituteopex.org/site/, engineering.wustl.edu

Why operational efficiency matters: the forces of change

These are the major drivers of the need for significant increases in operational efficiency.

1 **An aging population** coupled with an increase in chronic conditions such as Type 2 diabetes, COPD, and heart disease.

2 **Relentless competition for talent**. One third of physicians in the US are over 60 and nearly half of all registered nurses will reach the normal retirement age this year. And it's not just about recruiting—it's about retention through an improved work-life mix, greater engagement, and better access to the information needed to be more effective.

3 Unfortunately greater spending has not equated to better outcomes, which in turn has resulted in new outcome-driven reimbursement models. **Consolidation in the industry, growth in new locations and expansions continue**—primarily for scale, better market position, and leverage with payers. As always the need to make healthcare more affordable continues to increase. Indicators of further upheaval are appearing in other industries. Already some claim those in the millennial generation are prepared to trust their financial wellbeing to tech giants such as Amazon rather than mainstream banks* and we are all aware of the tendency to use Dr. Google before consulting our physician.

4 From a **care delivery** standpoint, the shift from fee-for-service to value-based programs continues. Service rationalization is paramount. Through consolidation, systems are making decisions on the point of healthcare-delivery based on volume, payer mix, and competition. Care coordination, such as patient-centered medical homes and linking to community health workers sounds easy, but remains elusive. With the new value-based models and pay-for-performance there is a redistribution of risk to the provider and even the patient. But data-driven insights and actions are even more important to mitigate risk in near-real time.

5 **Consumerism**—today's consumers have greater choices. The internet means that shared patient experience, hospital ratings and HCAHPS scores are easily accessible. And as patients participate more and more in their own care, portability and interoperability become more important to them and can be a differentiator. We should also bear in mind the rise in consumer sensitivity to how data is used, commonly termed "nothing about me, without me." This goes way beyond the compliance requirements for HIPAA, GDPR and other legislative frameworks.

* Banking on the future, KPMG Australia 2017

6 The shift to **wellness** may well be the most difficult of all the challenges that the industry must answer. Since the dawn of the modern era, the focus has been on cure. Now faced by a growing number of health crises, the industry finds itself having to shift to preventive treatments and therapies that will demand wholesale adoption of multiple new economic and business models such wellness-as-a-service, remote active health monitoring, and more. This shift to prevention as a focus will also need to be holistic, encompassing mental and physical health.

7 **Cybersecurity** remains a huge threat. Technology that is always up to date is the only real protection. It is no longer acceptable to run the back office on software that is not designed to cope with an evolving healthcare landscape.

8 **Climate change** is perhaps the newest force of change but is increasingly recognized in many countries as an important factor in healthcare provision affecting population health, mortality rates, increasing numbers of patients requiring treatment for asthma-related conditions, healthcare worker efficiency and more.

> “Information Technology (IT) has the opportunity to dramatically improve the quality of care and lower the cost of care.”
>
> —Larry Ellison, founder and CTO, Oracle Corporation, March 2013

Watch the video: Larry Ellison on Healthcare: Impact of IT on Society

A Shared Vision at Blue Shield of California

Operational efficiency in action

Blue Shield of California's mission is to ensure that Californians have access to high-quality healthcare at an affordable price. In order to achieve our mission, it's critical that we remain disciplined stewards of our financial resources. Every dollar spent is a potential dollar that could be returned to our members. Working in Finance, no other business function is in a better position to deliver on this strategy.

Most members in Finance can tell you how much money is spent on administrative expenses and the potential for savings. As a member of our Finance Transformation team, I'm able to assess the interaction between the people, process, and technology required to support our financial processes as well as the opportunity provides. Unfortunately, it's all too common to find skilled personnel spending time on manual functions while they could better be applying their time to analysis and other value-add activities.

I believe that we must follow the guiding principles of standardization, simplification, and automation to make way for innovation with technology being the foundation to achieving our vision. One of the biggest examples and catalysts for change in our Finance department was our move to a unified SaaS solution. Not only did this reduce the overhead required to support the business, it also forced our business processes to align to best practices inherent in the platform.

As we continue our roadmap, we look forward to not only reducing manually intensive processes but also changing the way our end users interact with the technology. With the rapid advancement of OCR, RPA, ML, AI technologies along with chatbots, and voice interaction kits we are in the position to make this Finance of the future a reality. A "*touchless close*" is no longer a myth.

Anthony Kulesza, *Senior Program Manager, Strategic Portfolio Management and Finance Transformation,*
Blue Shield of California, January 2020

Operational efficiency and Oracle Modern Best Practice

In our first two books on Oracle Modern Best Practice we argued that all organizations needed to adopt a new set of best practices—digital processes that are end-to-end, evolved with the organization and leveraged with the best technology.

This ebook shows how healthcare organizations worldwide can adopt a new way of working that:

- Unleashes the talents of associates in back-office functions: primarily **finance**, **human resources** and **purchasing**.
- Improves efficiency.
- Reduces administration costs.
- Releases budget to be reassigned to patient care and research.
- Creates a healthcare organization that is truly data-driven and future-ready, more adaptive, responsive and that proactively seeks the best outcomes.

> “We need to take a radical new approach to technology across the system and stop the narrative that it’s too difficult to do it right in health and care.”
>
> —Department of Health & Social Care, UK Government

Policy paper: The future of healthcare: our vision for digital, data and technology in health and care, October 2018.

Chapter 2

Why Oracle Modern Best Practice for Healthcare?

Oracle Modern Best Practice for Healthcare is flexible, evolves with you to support change and innovation—and enables new ways of achieving radically improved performance.

Originally designed to exploit new capabilities made possible by the cloud, mobile, analytics, social, the internet of things, and big data, Oracle Modern Best Practice has now been updated to include new and improved processes made possible by AI/machine learning, blockchain, digital assistants, Robotic Process Automation (RPA), and augmented and virtual reality (AR/VR). In this potent mix of enablers, it's not just about the enabling technologies. We're including human-centric drivers of performance improvement such as social learning and crowd-sourced secure innovation.

- Cloud
- Mobile
- Analytics
- Social
- Internet of Things
- Big Data
- AI/Machine Learning
- Blockchain
- Digital Assistants
- Robotic Process Automation RPA
- Augmented and Virtual Reality (AR/VR)

Oracle Modern Best Practice is a **crayon-simple** concept that enables any healthcare organization to improve both quality of care and reduced costs. This enables providers to outpace change, become future-ready, and achieve more, faster, and with fewer resources.

Oracle Modern Best Practice reflects healthcare customer needs and requirements rather than showcasing product capabilities or technologies—however, all Oracle Modern Best Practices can be executed with Oracle products.

Equally, Oracle Modern Best Practice recognizes the **unique role of the healthcare industry** as custodians with responsibility for the collective wellness of the world's populations.

An Oracle brand since 2014, Oracle Modern Best Practice keeps pace and evolves with growth and changes in a fast-moving health landscape. This applies regardless of the size and complexity of your organization.

The Practice is local and global, enabling you to deliver the best results across departments, borders, languages, and both fiscals and physical domains.

Chapter 3

The healthcare finance function leans in

Finance leaders in healthcare face many of the challenges of those in the commercial sector and in government but with multiple added responsibilities. Challenges are both tangible, in the form of an ever-changing regulatory and funding topography and perhaps less tangible, with the knowledge that every decision made can be truly said to be life-changing.

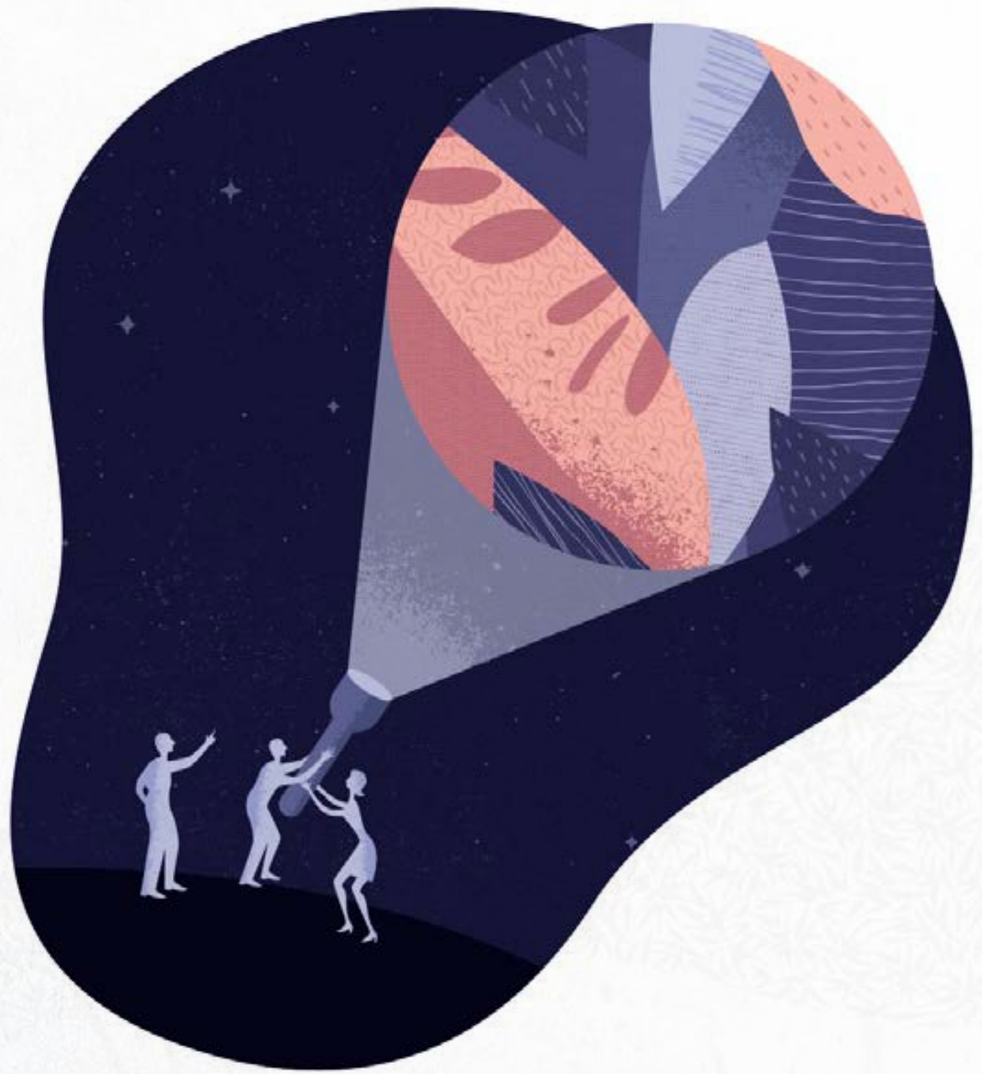
Greater and more sophisticated automation holds as much promise for those engaged in administrative, management and leadership roles as to those in frontline care. For too long IT budgets have fallen short in investing in software for the back office to support clinical excellence. Why should administrators have to work with technology designed to support Y2K? Why can't every hospital employee work with technology that is always up to date, always secure, and as easy to use as their favorite social network?

Using intelligent process automation and the insights gained from thousands of users in the healthcare industry, we can eliminate much of the administrative tedium and replace it with ways to generate insights to help the organization make better decisions faster.

Provider organizations will be able to leverage AI/machine learning to anticipate demand, predict key areas where stock must be held, and dynamically negotiate the most beneficial terms from pharmaceutical suppliers and others based on in-the-moment analysis of supplier quality, performance, and risk.

Planning, the organization's guidance system, will evolve to continually monitor internal and external changes, reallocating the right amount of resources to each department so the organization can satisfactorily address threats and successfully capitalize on opportunities. Connecting the entire planning landscape will make it possible to address workforce requirements, model multiple scenarios such as routine and seasonal demands or epidemics, and manage finances and the supply chain. This will align people, processes, and information to achieve desired outcomes.

The entire organization will benefit from real-time reporting with every employee having access to a role-based personalized dashboard, ensuring that the entire organization benefits from an information democracy secured at the right level.



> "Healthcare and education, in my view, are next up for fundamental software-based transformation."
>
> —Marc Andreessen, co-founder and general partner, Andreessen Horowitz

Budgeting and planning

Budget to approval: Automation will increase planning accuracy and enable healthcare institutions to better manage budget fluctuation and consumption as they leverage not only internal data sources but external sources to ensure that both budgeting and planning are truly demand-driven. As health systems deploy new service lines and pursue affiliations, mergers and acquisitions at an unprecedented pace, we predict that unified data will incorporate both internal and external data sources. This will drive advanced analytics to streamline budgeting and planning into continuous forecast models, providing insights to future workforce needs down to a skills level. Though pressure to improve will always be constant due to the evolving healthcare needs of the world's population, greater automation and the power and scalability of cloud applications with built-in AI and machine learning will enable huge leaps forward in this area.

Today: from budgeting as a transactional activity

Cloud · Mobile · Analytics · Social

Set budget
Aligning with corporate strategy, seed the organizational budget with high-level targets such as revenue, margin, and working capital.

Allocate targets
Assign targets across department, organization, or cost center using allocation rules such as gross revenue, margin, bed numbers, space occupation, budgeted headcount, FTE.

Determine baseline assumptions
Create bottom-up plans, establish global drivers (e.g., talent availability and cost, supplier/drug cost increases, salary inflation). Set account-based forecast methodologies (e.g., growth rate, % of another account, etc.).

Create bottom-up plans
Use historical run rates and advanced predictive planning capabilities leveraging time-series forecasting technique. Include best/worst scenarios. Analyze variance to allocated targets. Manage tasks via centralized dashboard.

Validate assumptions
Validate plan accuracy using built-in time series regression techniques and comprehensive reporting capabilities to analyze historical trends such as nursing floor productivity or number of contract employees.

Drive consensus
Ensure alignment with strategic goals, such as specific physician specialties. Securely collaborate with stakeholders on unit budgets. Use what-if analysis to test key plan assumptions such as ACA.

Monitor and consolidate
Using a robust workflow engine, automatically route approval requests based on preset rules. Consolidate, review and submit budgets to next level.

Approve budget
Approve the final organizational budget and communicate to all stakeholders (for example, office of the CFO, physician groups, Board of Directors).

Predicted: to intelligent, agile and complete budgeting and planning

Cloud · Mobile · Analytics · Social · AI/ML · IoT · Big Data

Set targets

Set long-term strategy and then seed operational and financial targets using predictive planning on historical performance, operational data, and external data such as population health, workforce requirements.

Create plans

Use predictive planning incorporating intelligent algorithms to validate plans and forecasts. Distribute targets and adjust operational and financial drivers to monitor business impact at a consolidated level and amend where needed.

Approve and monitor

Approve final budget and communicate to all stakeholders. Exceptions and new insights are highlighted automatically for needed attention.

Financial reporting

Period close to financial reports: We believe automation will eliminate many of the activities around the current period-close process. Eventually as AI/machine learning capabilities continue to expand, the close itself could become obsolete as the process becomes autonomous while remaining fully compliant, freeing up scarce budget to be reallocated to patient care.

Today: from transaction processing

Cloud Mobile Analytics Social

Close subledgers
Monitor organization-wide close status. Interact on and finalize outstanding sub-ledger transactions and exceptions.

Pro forma close ledgers
Prepare and review preliminary statements (e.g., balance sheet, income statement, cash flow statement, responsibility reports, etc.) Prioritize outstanding transactions based on initial results.

Account reconciliation management
Automate routine tasks to streamline and optimize reconciliation cycle. Manage exceptions collaboratively and gain real-time visibility into task performance. Properly qualify prepared records.

Close ledgers
Route close tasks to task owners automatically. Collaborate to streamline the close for each entity. Monitor organization-wide close status.

Consolidate entities
Transform each entity's (e.g., region, service type) results to the consolidation chart of accounts. Eliminate intercompany activity and minority interest.

Securely create reports
Distribute financial statements and responsibility reports to internal stakeholders. Use a collaborative, process-driven approach to define, author, and review variance and to incorporate feedback.

Update financial forecasts
Analyze variance (e.g., over/under budget by department), volume (e.g., number of procedures or patients over or under budget), and financial trends (e.g., accounts routinely over/under budget) Modify forecasts and financial plans based on latest insight.

Publish reports
Publish financial and management report packages such as the Board Package and narrative reports such as Annual and Community Benefit reports.

Predicted: to intelligent closing

Cloud Mobile Analytics Social

Continuous virtual close

Automate and continuously close processes for ledgers, subledgers, posting actions and transaction processing.

Manage exceptions and reviews

Recommendation-driven exception management based on business policy, compliance requirements, healthcare outcome targets, and user preference. Includes user confirmation of automated handling of similar exceptions and anomalies subject to rule-based approvals.

Close and securely publish

Automated secure publishing of financial statements and reports including Annual and Community Benefit reports and any reports required for compliance to all interested parties, leveraging secure collaboration to incorporate feedback.

Chapter 4

The healthcare supply chain—towards outcome/value-based purchasing

Healthcare is no longer siloed within the four walls of the clinical setting. The care continuum itself extends from the producers, insurers, governments, and extends through the community, the providers, to non-acute care and into the home. This is the extended healthcare value chain that enables the patient-centric supply chain. It means that people, data, supplies, and care itself follow the patient across this new journey, and that new care models have to support that need.

The healthcare supply chain depends on four factors: Immediacy, Efficiency, Security and Integrity. Some of these equally apply to the commercial world, but in healthcare the consumer is the patient. That one statement changes everything.

Immediacy because the patient can't wait. Stockouts and delays can be deadly. The healthcare supply chain has to be both responsive and predictive. This is challenging when the healthcare landscape is so complex and evolving so quickly.

Efficiency because cost is paramount. We have to reduce administration and supply chain costs because every penny saved can be reassigned to care —this against a background of increasingly expensive drugs and therapies and increases in the number of people with chronic conditions.

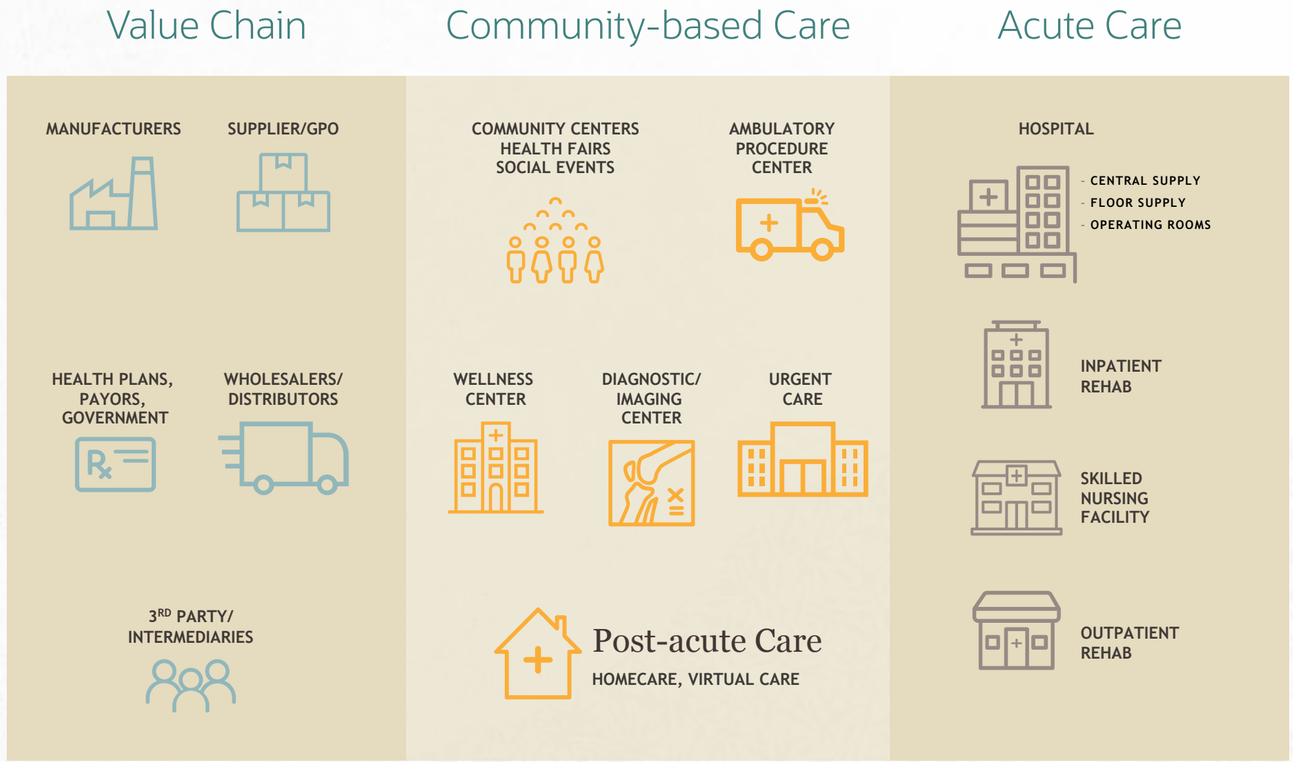
Security is paramount. Not only physical security but equally cyber-security at a time when hospitals worldwide have faced disruption to operations and monetary losses from malware and ransomware attacks.

Integrity matters more than ever. Certainty when drugs are dispensed is critical. Counterfeit drugs are said to cost the pharmaceutical industry US$200 billion per year.

All of this is against a background of increasing complexity. Though we refer to a healthcare supply chain, it's important to note that there are in fact multiple supply chains, each with a different level of maturity.

The primary supply chains include: medical/surgical, clinical preference items, trunk stock/loaner trays, consignment, prosthetics and medical equipment.

In the words of a recent Oracle white paper, *The Clinically Integrated Supply Chain* "The need for increased patient safety, scale of supplies expenses and the pressure hospitals face to control costs underlines the urgency for hospital supply chain transformation. With many hospitals having low single-digit operating margins, even a 10 percent reduction in hospital supply expense could significantly impact profitability."



85% of healthcare occurs outside a hospital

David Kindig, M.D., Ph.D., University of Wisconsin-Madison School of Medicine

The complex web of healthcare supply chains

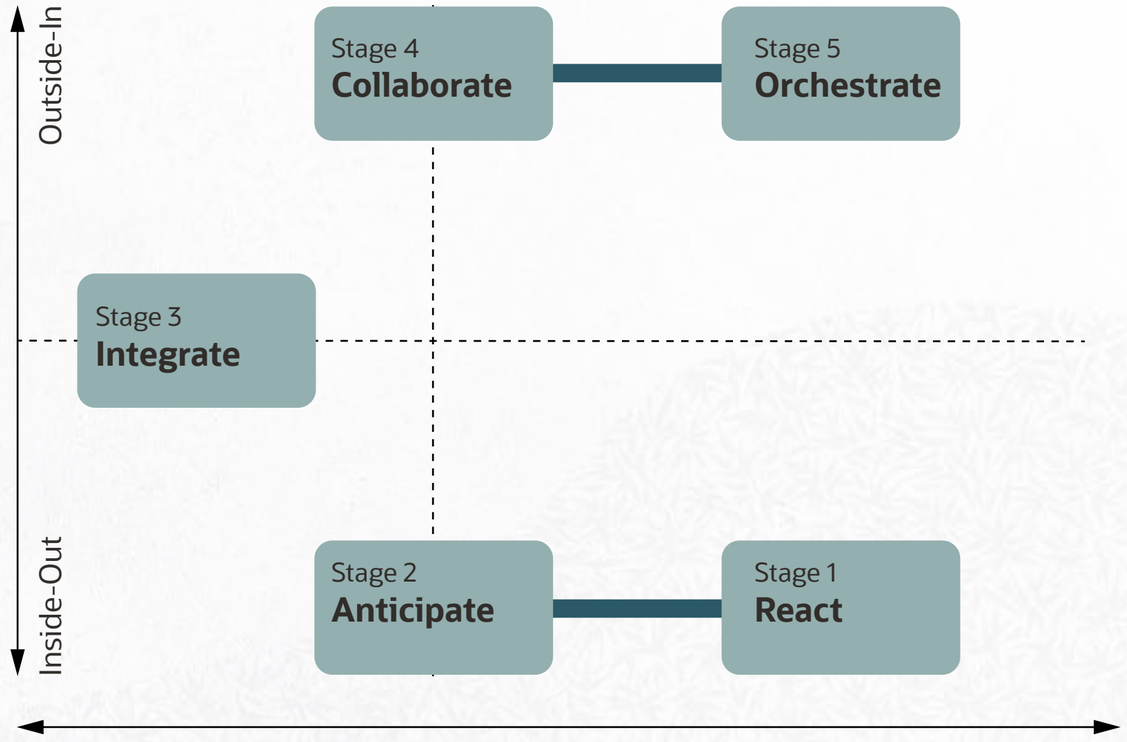
- **Medical/surgical**. These are low-cost, high-volume/high-velocity items used throughout the hospital, e.g., bandages, exam gloves, and patient care kits. Medical/surgical items are typically considered commodities, basic necessities for daily patient care.
- **Pharmacy.** Hospital pharmacies maintain the right levels of valuable medications and also help the departments follow complex and highly regulated processes for procuring, managing, and tracking these supplies.
- **Clinical preference items (owned).** These are typically high-cost implantable medical devices and items involved in specific clinical procedures, kept on hand in the clinical department storeroom. Their purchase and use is often dictated by physicians and/or value analysis committees and managed by clinical department inventory coordinators.
- **Trunk stock/loaner trays.** These are Items brought into the operating theater by the manufacturer's rep for each patient case as requested by the physician and are not stocked in inventory, but billed for upon use.
- **Consignment.** These items are financially owned by the manufacturer/vendor with which a hospital or department has a consignment agreement. As part of such agreement, consigned items must be replenished to the levels defined in the agreement. The hospital pays only upon replenishment.
- **Prosthetics**. A prosthesis may be either an implant, such as a joint replacement, or removable, such as an artificial leg or hand. Orthopedic prosthetics are largely based on individual surgeon preference on a case-by-case basis. Multiple suppliers may exist across trauma, microplating, and spinal surgery, with little history available.
- **Medical equipment.** These are assets, such as imaging equipment and patient monitors, that are procured for use across the hospital or in specific clinical departments, and are subject to depreciation.

> "Healthcare technology should just work."
>
> —BJ Moore, CIO, Providence St Joseph's Health

Source: https://blogs.oracle.com/modernfinance/health-care-technology-should-just-work

The healthcare supply networks of the future will leverage more and more emerging technologies to deliver the best in patient care and true operational efficiency. These networks will achieve complete orchestration across providers, suppliers, and payers to increase patient value.

Harnessing the power of machine learning changes transaction processing to identify anomalies and trends in real time, and extract valuable insights from ever-increasing volumes and sources of data. Leveraging blockchain for electronic medical records (EMR) facilitates smart contracts for preauthorizations and claims, medical adherence and history, credentialing, and insurance enrollment. Adopting IoT to eliminate costly overspends on maintenance reduces supply hoarding and diversion.



> “Digital health is not about technologies. It is about health.”
>
> —David Rowlands

What is digital health? And why does it matter?

Digital Health Workforce Academy, Health Informatics Society of Australia, December 2019

Requisitions

Requisition to receipt: New technologies will change how tomorrow's healthcare organizations purchase. Transparency, secure access to information and a holistic view of budgets, budget consumption, and related spending information will be available on any device and at all levels based on user privileges. Routine transactions such as purchasing medical and non-medical supplies can be executed automatically at any approved location and on any device according to business rules that include ranges of parameters such as compliance requirements, patient care related targets, supply sensitivity, supplier discounts, drug and therapy availability/pricing.

These technologies will free humans to address exceptions, focus on eliminating contract leakage and potential fraud, and investigate more strategic purchasing based on volume, seasonality, time of year, etc., assisted by AI/ML for pattern matching, timely insights and recommendations. Non-routine purchasing continues but is controlled by organizational policies to ensure both optimal patient-based and value-based outcomes. Users will benefit from pervasive use of chatbots to ensure both ease-of-use and effective spend control.

—How can we see step changes in spend control, discount achievement and maverick purchasing in weeks versus months? Build an organization of strategic purchasers with automated business processes across your healthcare system or region.

Today: from approval management and a fragmented view of organizational spend

Mobile Social IoT

Raise requisitions
Create purchases automatically or easily locate intended goods and services from approved catalogs via consumer-like UI.

Approve requisitions
Route approval automatically based on defined thresholds, approval hierarchies, and purchasing categories.

Create purchase orders
Automate purchase order creation for approved suppliers based on negotiated pricing and contract terms.

Approve purchase orders (optional)
Route approval automatically according to predefined business rules.

Dispatch purchase orders
Automatically deliver approved purchase orders via secure electronic channels or supplier portal.

Receive goods and services
Record goods received or approve invoices for services rendered to trigger automated matching in Payables.

Predicted: to value/outcome-based purchasing, automated replenishment, control, transparency and information in real time

Cloud Mobile Analytics Social IoT Big Data AI/ML Blockchain AR/VR

Raise requisitions

Automated creation and recommendation-driven approval and ordering of regular purchases from approved suppliers based on business rules, compliance to group purchasing agreements (GPO) and local compliance requirements (for example, NHS NICE). Easily locate intended goods and services via chatbots/assisted UI.

Manage exceptions, anomalies, and business policies

Recommendation-driven exception handling based on business policies, compliance, and user preferences. Adjust policies/rules based on learned insight, change of buying pattern, patient care objectives and business environment.

Receive goods and services

Record goods received or approve invoices for services rendered to trigger automated matching in Payables.

Integrity and security for the supply chain

Intelligent track and trace: We predict that track and trace will evolve from a simple query that results in information on shipment arrival and perhaps progress to a function that provides every healthcare stakeholder secure, verifiable and validated nondisputable information on every shipment from the manufacturers production line to the clinical location. This will provide a timeline view with tracking history and drill-down displays of related documents.

Today: from tracking and monitoring

Cloud · Mobile · Analytics · Social · IoT

Receive tracking query
Inventory coordinator reviews requests for information on shipments of managed items such as physician preference items or medical/surgical supplies in need of urgent replenishment.

Initiate tracking search
Initiate search to identify current location using shipper-supplied information such as AWB, Waybill, Bill of Lading, consignment note, etc.

Identify shipment location
Identify current location or in-transit progress.

Respond to tracking query
Inform original requestor and take follow up action if necessary.

Predicted: to verification and validation

Cloud · Mobile · Analytics · Social · AI/ML · IoT · Blockchain

Inbound shipment processing

Receive shipment notification from suppliers via personalized digital assistant along with required statutory data, manufacturers batch/lot number authentication and origin information available in the blockchain as required. Users can query location and status via digital assistant using simple “Oracle, where’s my stuff?” questions and receive plain language text and/or spoken responses.

Monitor in-transit conditions and manage exceptions

Stakeholders with suitable access rights can monitor shipments in transit along with selected information related to the shipment. Users can manage alerts on exceptions such as out-of-bound environmental factors or unexpected stops, delays, etc., based on profile, and take required action in line with legal, compliance, and other requirements.

Receive goods

Receive goods at warehouse, hospital stockroom, or usage location. Verify quantity and confirm safe receipt in good order, and validate condition across any device (mobile, scanner, desktop).

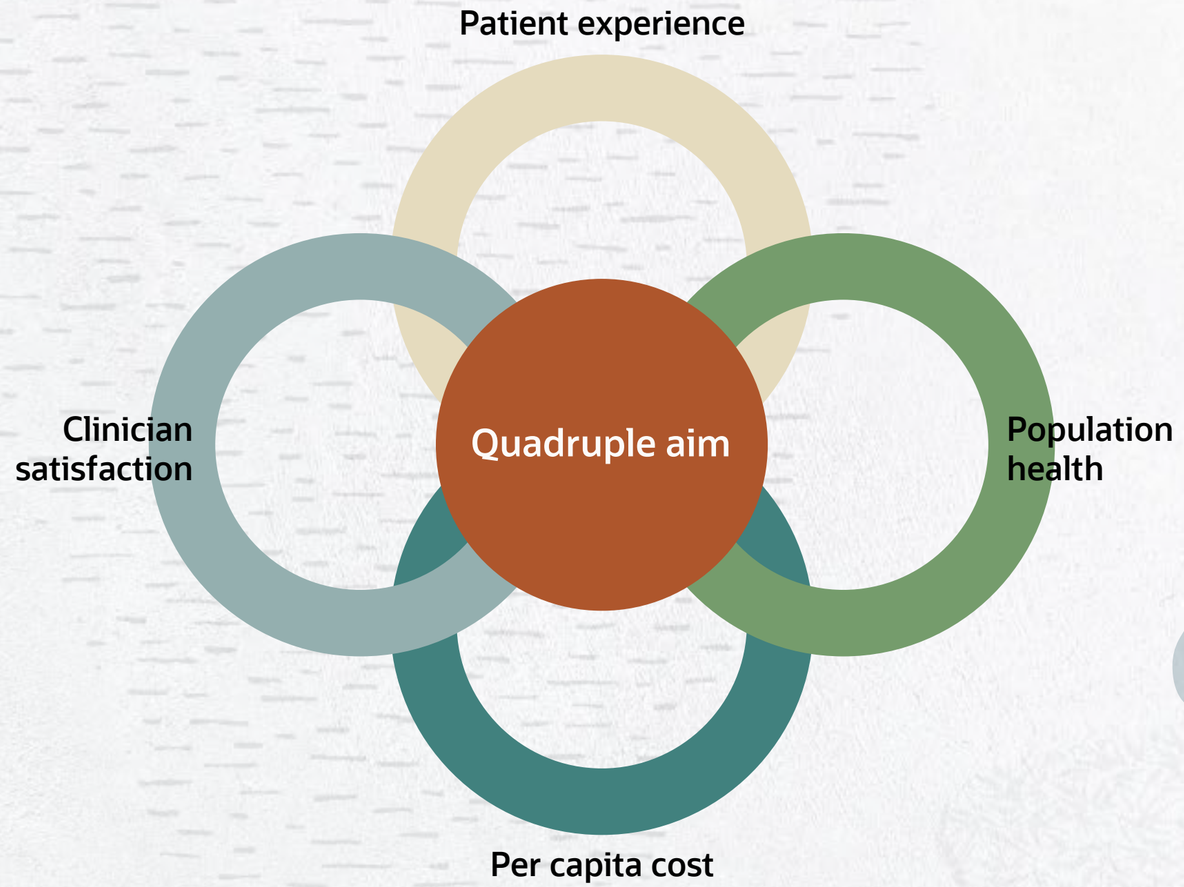
Chapter 5

HR: competing and caring for caregivers

Oracle's very popular ebook Healthcare Industry Viewpoint explains that as the general population ages, the numbers of people requiring care and the complexities of care needed put extreme burdens on all sectors of the existing workforce and threaten to deter new entrants.

Today, nearly one-half of physicians and nurses report substantial symptoms of burnout, citing too many bureaucratic/administrative tasks and too many hours at work. Over half of US hospitals report nurse vacancy rates above 7.5%, and overtime and agency spend has increased 169% since 2013. Relieving the mounting pressure on caregivers to deliver improved patient safety and satisfaction at lower cost cannot be addressed solely with more caregivers. In fact, many estimates predict increasing shortages of healthcare workers over the next decade.

Technology will play a critical role in improving the wellbeing of caregivers—automation will reduce time spent on administration and increase time on patient care. Consumer grade technology utilizing machine learning will more accurately forecast workforce demand and reduce overtime and agency spend, and digital assistants on mobile platforms will help to return time to busy caregivers.



A new generation of caregivers expects more: a connected mobile work experience, less time spent on administration, more time on care, consumer-grade technology that is always up to date. But healthcare institutions and leaders are now expected to be a trustworthy source of information about social issues and other important topics where there is not general agreement.*

We cannot forget that healthcare is a **vocation** as well as a **profession**.

This industry allows us to make a real difference to the lives of those around us while we earn a salary. And that applies to every type of caregiver, from care home auxiliary to manager and administrator, from registered nurse to recruiter and from clinician to physician and surgeon. Organizations that focus on making this difference will succeed competing for the best talent, regardless of the organization's location, size or specialization.

> Despite our financial and economic anxieties, we are still able to do the most civilized thing in the world—put the welfare of the sick in front of every consideration."
>
> —Aneurin Bevin, Founder of the NHS, 1948

* 2019 Edelman Trust Barometer, 2019 Global Report www.edelman.com

Recruiting and onboarding

Recruit to onboard: We predict machine learning and digital assistant adoption will streamline and enhance the candidate experience while also significantly reducing administrative tasks for recruiters, matching best candidates to job requisitions and personalizing the onboarding process. This will accelerate time to productivity and help lower first-year turnover, a chronic challenge in healthcare.

Today: from resume screening

Cloud · Mobile · Analytics · Social · AI/ML · Big Data

Determine workforce need

Leverage workforce modeling and predictive algorithms to identify resource, budget and statutory requirement needs. Understand talent supply/demand to mitigate future shortages of credentialed staff due to retirements, market expansions or turnover. Create new workforce plans and submit to finance team for approval. Authorize job requisitions.

Drive candidate engagement

Manage institution brand across website/social media for cohesive messaging. Include digital assistant for candidate interactions. Present relevant content to candidates (for example, articles, reports, events) and recommendations to personalize the experience.

Manage sourcing

Find the right clinical candidates to fill current needs but also those with potential to meet future needs/credentials (for example, telehealth and medical informatics) by sourcing from social media, referrals, job boards, agencies, or internal talent profiles and succession pipelines.

Intelligent screening

Identify top clinician prospects via multitiered automated screening and assessment tools (e.g. clinical questionnaire, tailored behavioral assessments). Review candidate's social activities, background, qualifications, employment authorization (e.g. USA: H1-B, green card) and certifications (e.g. NCQA, TJC). Determine desirable candidates, conduct interviews and perform background checks .

Select clinical candidate and generate offer

Decide best-fit candidate, analyze offer insights (for example, likelihood to accept), and collaboratively manage salary details with the Compensation department. Obtain required approvals and electronically deliver offer package.

Onboard new hires

Automate the completion of onboarding tasks with new hire portal and dashboards including documentation and discussion of credentialing requirements (for example, NCQA,TJC) and ongoing licensing board certification needs. Manage benefits and learning plans.

Predicted: to best-fit candidates

Cloud · Mobile · Analytics · Social · IoT · Big Data · AI/ML · Blockchain · AR/VR

Align sourcing with workforce needs and care targets

Automate healthcare and administrative workforce planning to determine future resource and budget needs in line with care targets. Drive external and internal candidate engagement in line with the approved plans and review an auto-generated list of potential prospects with the required certifications.

Select top prospects

Use intelligence-driven recommendations to reskill and (re)certify existing talent for internal mobility, to hire new talent, or to outsource. Automate top prospect selection, likelihood of success, and offer generation.

Onboard best-fit candidates

Onboard candidates, generate benefits packages, deliver required equipment including uniforms, provided target career and certification/recertification plan for now and for the future, and create talent profile(s).

Retaining and engaging the healthcare workforce

Employee insight to work-life alignment: We predict leveraging social, analytics, Internet of Things, big data and mobile to improve engagement by fostering work-life balance and workforce wellness. Gamification, social connections, and mentoring opportunities increase motivation, help achieve wellness goals, and improve productivity.

Today: from goal setting and tracking

Cloud · Mobile · Analytics · Social · IoT · Big Data

Obtain baseline and set personal goals

Leverage key insights to identify and set goals in alignment with personal and career aspirations (for example, credentialing such as NCQA, TJC, certifications, management status). Determine steps for attainment (such as classes, seminars).

Manage wellness progress

Design, track, measure, and evaluate trends and patterns of wellness activities using dynamic tools, including wearables and smartphone apps, to determine level of goal (for example, BMI reduction, tobacco cessation) success.

Measure reputation

Optimize social presence and reach by measuring level of influence, impact, generosity, and activity via input from internal and external sources including LinkedIn, Twitter, Facebook, Oracle Social Network.

Select volunteer programs

Engage in hospital-promoted volunteer projects that are of interest and foster targeted career development successes. Track and analyze volunteer hours to maintain 'Not for Profit' status.

Participate in social contests

Improve motivation and connect with coworkers by engaging in work-related competitions (such as volunteer hours, health goals, community pride), while sharing overall progress of personal goals and volunteer work.

Receive kudos, rewards, and recognition

Receive acknowledgment of goal attainment and progress that promote work-life alignment.

Predicted: to engagement and recognition

Cloud · Mobile · Analytics · Social · IoT · Big Data · AI/ML · Blockchain · AR/VR

Obtain baseline and set personal goals

Leverage key insights and profile-driven recommendations to identify and set goals in alignment with personal and career aspirations (for example, credentialing such as NCQA,TJC, certifications, management status). Determine steps for attainment (such as classes, seminars) based on recommendations generated.

Manage wellness progress

Design, track, measure, and evaluate trends and patterns of wellness activities using dynamic tools, including wearables and smartphone apps, to determine level of goal (for example, BMI reduction, tobacco product cessation) success.

Select recommended initiatives

Engage in hospital-promoted volunteer projects that are of interest and foster targeted career development successes. Track and analyze volunteer hours to maintain 'Not for Profit' status. Improve motivation and connect with coworkers by engaging in work-related competitions (for example, volunteer hours, health goals, community pride), while sharing overall progress of personal goals and volunteer work.

Manage kudos, rewards, and recognition

Receive recognition, acknowledgment of goal attainment and progress that promote work-life alignment in line with the goals of the healthcare organization, care outcome targets, and compliance requirements.

Chapter 6

Healthcare: the data story

To complement the step-change in processes needed, we should address data.

Healthcare delivery is ‘data-needy’ in that the methods used and points of capture are wildly diverse ranging from patients with phone apps through to national data collection. Data capture has become easy—but now we all want a more holistic picture.

We want to predict, advise and prevent disease from ‘cradle to grave’ while acknowledging privacy concerns and complying with legislation such as GDPR and CCPA. We want to know how a mother should eat while pregnant. At birth, we want to predict and assess the risk of disease through genetic profiling, and to understand the impact of environment (pollution, local employment, demographics) on an individual.

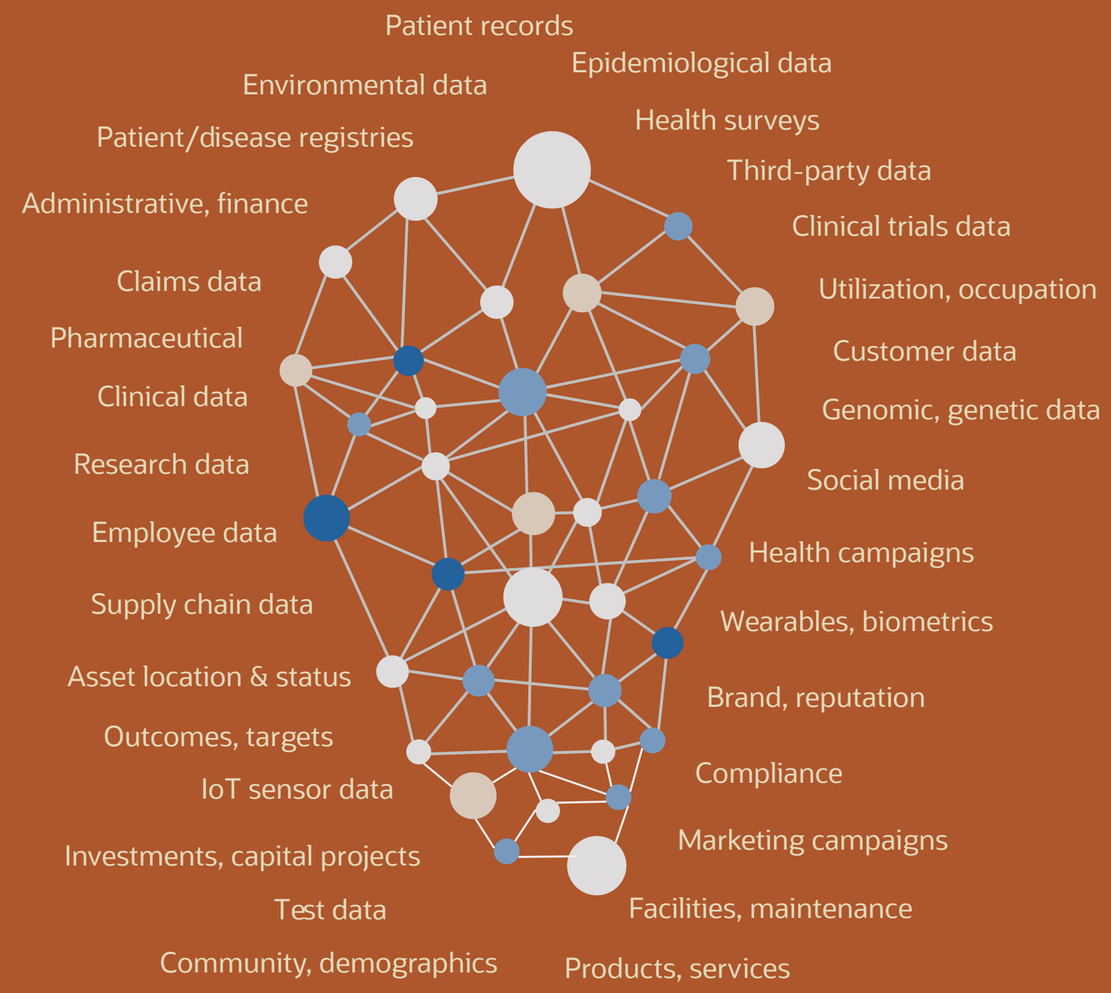
On accessing services, we want clinicians in a multidisciplinary team—now facing an aging population with increased comorbidity—to be able to **easily view data in one place**.

In all of these scenarios it's about accessing, integrating and adding multiple data layers to enable the clinician (or computer) to build an informed view of the patient to better address their needs.

But where do we start? Care costs money, and proving the case for preventive intervention can be particularly problematic. Finance is an essential part of the solution. Providing patient data is one part of the problem; the real nirvana is in understanding the cost of every healthcare intervention, whether direct, indirect or preventative, and its clinical outcome.

The essence of the finance and HR leader's role is to be credible and data-led to drive accountability. Establishing technologies that can automate tasks; provide self-service to the wider organization; bring predictive capabilities; and integrate data sets easily will allow the finance function to show its real strength in using insight to inform and develop with clinicians new, more efficient and effective, models of quality healthcare.

Common data sources for data-driven wellness



Chapter 7

Medice, cura te ipsum*— new metrics for measuring what matters

*Physician, heal thyself

Throughout this book we've talked about what matters: reducing administration costs and possibly more importantly reducing time spent on administrative tasks to allow great focus on patient care. We've illustrated the complexity and variety of data available to healthcare organizations.

To quantify progress and make better decisions faster, organizations will have to add a whole new set of key performance indicators (KPIs) to what is already measured. Tracking performance against those KPIs has to happen in almost real time—in other words, everyone in the organization needs to know what's happening now and what actions are recommended and/or necessary. In addition, the healthcare organization of the future has to have a layer of technology that allows them to predict and model future demand, costs, income, resource requirements, etc., across the entire enterprise, regardless of how complex it is and what is happening in the macro environment.

> "Administrative work consumes one-sixth of U.S. physicians' working hours and lowers their career satisfaction."
>
> —Steffie Woolhandler, David U. Himmelstein, International Journal of Health Services, October 2014

https://journals.sagepub.com/doi/abs/10.2190/HS.44.4.a

As for the nature of the KPIs themselves, those will be all the traditional metrics of a typically agile healthcare back office with a significant number of new metrics to ensure that value-based outcomes are met.

Some KPIs will need to be reviewed as to whether they really support the institution's vision and strategy. For example, a metric for *% by count of invoices matched to an electronically generated purchase order* suggests costly inefficiencies within the organization. Surely an efficient healthcare system would have negligible number of supplier invoices that fit this category?

New metrics will include *% process automated, dynamic days stock cover, time (days) to onboard, days to 100% efficiency, fastest growing cost element, profitability and cost by service line, specialty, therapy, ward, and/or location, occupation days by clinic, specialty, etc*.

The tools you use need to be different. Excel spreadsheets and data visualization software are not going to be enough. What's needed is a combination of business intelligence and enterprise performance management software that harnesses the power of artificial intelligence and machine learning. This is where everything is automated, self-securing, self-patching and self-tuning. This new solution makes recommendations as you use it and can be adopted by anyone in the organization, with minimal training required.

As healthcare organizations evolve to include digital health as a major component of the patient care mix, measuring what matters—matters more than ever.

The technology enablers

The cloud delivers software and new processes that are always up to date, a phenomenon that most in the back office have never experienced. It enables new processes that are not only easy to adopt but evolve with the organization. It delivers a mobile-first philosophy with intelligence driven by analytics. The cloud also delivers on the benefits of social networking, IoT, big data, machine learning, blockchain and augmented/virtual reality.

But the purpose of this guide isn't to go into detail on these technologies. Our goal has been to explain in crayon-simple terms the impact these enablers can have on your healthcare organization and how they help you generate an increase in top-line revenue, better productivity, lowered costs, and improved compliance.

On the next few pages we'll explore each of the enablers and accelerants and provide you with links to more information.

> "The best interest of the patient is the only interest to be considered, and in order that the sick may have the benefit of advancing knowledge, union of forces is necessary."
>
> —William J. Mayo MD, 1910

The technology enablers

The Cloud

The cloud enables your healthcare organization to purchase software and IT resources as a service, shifting the burden of capital expenses to a flexible, pay-as-you-go model. It resembles a utility that supplies water or power—users are able to access business applications at any time from multiple locations, track usage, and scale capacity without large up-front costs. More importantly, it's scalable to enable organizations to do things that were impossible before and delivers continuous innovation, with updates every 90 days containing 100s of new easy-to-consume features.

Mobile

A mobile-first strategy means that you securely access powerful analytics and forecasting tools, patient, customer and supplier insights, real-time information on inventory, financial data, performance of clinics, therapies, healthcare campaigns and much more, when and where you need it.

Analytics

What could you change to lower costs? To increase profitability? What are the latest drug developments that could affect your organization? Analytics (also known as Business Intelligence) provide you with this information in the form of dashboards showing your KPIs and metrics in real time, together with Enterprise Performance Management capabilities to enable effective data management, scenario modeling, accurate forecasting, profitability and cost management, and much more.

The technology enablers

Social

A naturally collaborative and social work environment seamlessly connects users and content, no matter where your people are located or which devices they prefer to use. Social capabilities are embedded directly into modern cloud-based business processes so it's easier to share information securely and in context without it being lost in the morass of email or paper-driven communication systems.

The Internet of Things

The Internet of Things delivers significant opportunities to generate value from the data collected by devices and things. Examples include remote patient monitoring, asset tracking and maintenance of key equipment within institutions, and use of remote monitoring for post-acute care and chronic disease management.

Big Data

Big data is a collection of data from traditional and digital sources that, when harnessed, can transform your business. It includes data from your own systems plus data from devices, data streams, community and demographic data, blogs, social networks, and more. It offers an opportunity to gain insight, quickly test new ideas, and change business operations including the use of genomic data for precision medicine and hyper-personalized treatments.

The technology enablers

Machine Learning

Machine learning focuses on building systems that learn—or improve performance—based on the data they consume. In the healthcare arena, we see frequent use of ML for the interpretation of medical images and increasingly as an enabler of second-opinion services. When we interact with banks, shop online, or use social media, machine learning algorithms come into play to make our experience efficient, smooth, and secure. In this book we show the dramatic improvement machine learning can make with two aspects: recommendations, and next-best actions.

Blockchain

Blockchain builds a growing list of unalterable records (called blocks) that are linked together to form a chain that is securely distributed among participants. It allows organizations that might not fully trust each other to agree on a single, distributed source of truth. It minimizes the cost and delays of using third-party intermediaries for financial transactions. Blockchain also eliminates manual, error-prone processes, and information redundancy. It can enable healthcare networks to ensure the provenance of drugs throughout the supply chain to protect against fraud and counterfeit.

Augmented & Virtual Reality

Though these two technologies are different, they are related. Augmented reality provides an interactive experience simulating the real-world, which will prove particularly applicable to industries where maintenance, repair and similar activities dominate. In the medical field, this offers the promise in the future of remote treatment and/or surgery. Virtual reality provides a simulated experience that differs from the real world and promises to revolutionize training and education in particular.

Chapter 8

Looking beyond our predictions

The predictions in this book are based on what we see two to three years in the future. Addressing the issues we describe is important, but equally important is what we can expect in 2025. We need to build a foundation to accommodate this outlook that includes:

A New View of Health

- A more holistic view of all factors that impact health: a 360-degree view of a patient.
- Combining clinical and genetic data for more precise medical treatments and increased success of clinical trials.
- Reforms that emphasize primary care and early prevention.
- Increased emphasis on elder care as our population ages.

A Renewed Focus on Value-Based Care

- More providers and payers are moving towards preventive or “well” care as a way to reduce costs associated with chronic conditions.
- Increased emphasis on care coordination and accountable care to improve care delivery across providers.
- More providers are realizing best practices in use in other industries, and supply chain holds much opportunity.
- Continued shift toward higher risk value-based care models, especially in the U.S.

Even More Consumerism

- Growth in virtual hospitals to increase access to care and reduce burden on understaffed providers.
- Increased locations of care (urgent care, wellness clinics, transfusion centers) offering more complex services.
- Prioritization of the patient experience—from online searches for providers, to information, to receiving care.
- Continued evolution of AI and machine learning, used as “learning-enabled health systems,” along with static medical records, in order to predict/prevent disease.

> “We need to take a radical new approach to technology across the system and stop the narrative that it’s too difficult to do it right in health and care.”
>
> —Department of Health & Social Care, UK Government
>
> Policy paper: “The future of healthcare: our vision for digital, data and technology in health and care,” October 2018

Chapter 9

Next steps

In this guide, we've explored how the healthcare industry can benefit from a new set of processes enabled by new technologies. Our predictions indicate where those processes are expected to evolve in the future.

We've also covered the enablers of Oracle Modern Best Practice for Healthcare:

- Cloud
- Social
- AI/Machine Learning
- Mobile
- Internet of Things
- Blockchain
- Analytics
- Big Data
- Augmented and Virtual Reality (AR/VR)

Starting your journey to standardization on Oracle Modern Best Practice is easy, and the good news is that you don't need to do everything at once. You can take a modular approach.

Addressing your immediate business challenges with simple-to-adopt Oracle solutions can start with a conversation with an Oracle expert.

We know you'll want to know more and the Oracle sales team is ready and waiting to assist you. Call us now.

Further reading:

Our customers https://www.oracle.com/customers/

Oracle for Healthcare https://www.oracle.com/industries/healthcare/

Ebook

Oracle Modern Best Practice Explained

Ebook

Oracle Modern Best Practice—Predicted

To discuss how we can help your organization call +1.800.ORACLE or visit oracle.com.

ORACLE CORPORATION
Worldwide Headquarters
500 Oracle Parkway, Redwood Shores, CA 94065, USA
Worldwide Inquiries
TELE + 1.650.506.7000 + 1.800.ORACLE1
FAX + 1.650.506.7200
oracle.com

Connect with us

Integrated Cloud Applications and Platform Services

Oracle is committed to developing practices and products that help protect the environment