The Modern Healthcare Value Chain is a Care-centric Supply Chain

Hector Rodriguez, MBA
Oracle Healthcare Industry Vice President
Session Overview

Abstract:

- Healthcare organizations must leverage modern hybrid-cloud technology, cybersecurity and identity, and data to truly optimize healthcare outcomes and address the IHI Triple/Quadruple Aim objectives.

- In this session we'll explore the need to deconstruct and re-construct the traditional healthcare value chain into a data and process driven care-centric supply chain that is designed to provide real-time insights, intelligence, and decision support across operational and clinical systems.
Problem: Emergency Room wait times were an immediate concern that 8% of patients left unseen. 
Solution: More resources & better processes reduced wait time, now < 1% of patients leave without being seen.

Problem: Nurses found themselves without basic supplies, “There was one thermometer on a 40-bed unit.
Solution: Remediate gaps immediately. Modernization, technology investments, supply chain improvements.

*This is the presenters interpretation of a successful story of patient centered care which is what the care-centric supply chain must support.
Value Chains and Supply Chains
Value Chains and Supply Chains

Michael Porter, a Harvard Business School Professor & Economist, defines a value chain as the end-to-end production chain from the input of raw materials to the output of final products and/or services.

➔ Each link, or 3rd party*, in the chain should add value to the original inputs and the outputs.

*This is why 3rd Party Risk Management is Critical
Value Chains and Supply Chains

An industry value-chain, also known as a Supply Chain, is the physical representation of the various processes involved in producing goods and services, starting with raw materials and ending with the delivered product.

Source: https://en.wikipedia.org/wiki/Supply_chain
Traditional Healthcare Value Chain - 2001

Hospital Industry Value Chain

Payer
Government
Employer
individual

Intermediary
Insurers
HMOs

Hospital

Supplier
Wholesalers
Group
Purchasing
Organizations
Mail-order
Distributors

Producer
Pharmaceutical
companies
Medical device
companies

What Happens When Value is Not Added?

- Healthcare is changing but the focus hasn’t been on the supply chain
- Value is not being added, but subtracted
- Patient safety, outcomes, and experience is at risk
- Therefore the supply chain needs to be transformed

Healthcare Is Changing

Aging Population
- Chronic conditions
- Use of genomics
- Population health
- Risk

Competition for Caregivers
- Aging workforce
- Shortage of caregivers
- Clinician satisfaction
- Work / life balance

Industry Consolidation
- Growth
- Rationalization of services and locations
- Efficiency through scale

Care Delivery and Payment Models
- Increased spend not equating to outcomes
- Transition to value-based care
- Per capita cost
- Technology to enable innovation

Consumerism
- Patient experience
- Ratings and rankings
- Convenience
- Data portability

Compliance and Security
- Protected Health Information
- HIPAA / GDPR
- Cybersecurity
- Government reform
- HITRUST CSF, TPRM, Shared Responsibility

JOIN THE CONVERSATION
Cost Pressures are Increasing

• Working Capital (Inventory)
  • Approximately 10-30% of products expire on hospital shelves
  • Excess inventories due to inefficient demand planning and static PAR (safety stock) levels
• Physician preferences resulting in product and cost variation
• Efficiency (SG&A)
  • Clinicians spend an average of 17% of their time on inventory management or searching for equipment
  • Recall efficiency – More than 4,500 drug and devices are recalled annually, ~10% have the potential to cause harm or death
• Assets (Property, Plant and Equipment)
  • The average utilization of mobile clinical devices is only 42%

78% of hospital staff face manual supply chain management

Source: RevCycle Intelligence
### Healthcare Outlook 2025

#### Growing and Aging Population
- Care in non-traditional sites will require greater supply chain reach and new processes.
- Changes in demographics and rise of chronic conditions will change demand patterns.

#### Value Based Care
- New entrants, consolidation and expansion will require new distribution and optimization strategies.
- Value based reimbursement emphasizes value beyond just price, putting the traditional GPO model at risk.

#### Care Innovation
- Patient centered supply chains will require personal health data & use of medications to be easily shared across providers.
- Growth of the virtual hospital will increase need for leasing / use of mobile assets.

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2x

Number of seniors age 65+ expected to double in the U.S. and exceed 10% globally by 2025.

U.S. Census Bureau & World Health Organization

50%

of current health systems will likely remain in the next 10 years based on the rate of consolidation

Deloitte Study

52%

of patient transactions are now online, virtual or via an app

Kaiser Permanente
Supply Chains Must Go Where the Patients Are

Value Chain
- Producer
- GPO
- Wholesaler / Distributor

Community-Based Care
- Wellness Center
- Diagnostic/Imaging Center
- Ambulatory Procedure Center
- Urgent Care
- Post-Acute Care

Acute Care
- Hospital
  - Central Supply
  - Floor Supply
  - OR’s
- IP Rehab
- Skilled Nursing Facility
- OP Rehab
- Homecare

85% of healthcare occurs outside a hospital

David Kindig, M.D., Ph.D.
University of Wisconsin-Madison School of Medicine
Looking Beyond Price for Total Value

Clinical Outcomes Focused
Collaboration is key for Physician Preference Items (PPI) to reduce variation, cost and improve outcomes.

Patient Centred
Enable caregivers to spend less time on inventory and more time with patients by ensuring availability and recall efficiency.

Value and Demand Driven
Approximately 10-30% of products expire on hospital shelves and many PAR locations are static min/max levels resulting in excess.

Process Enabled
Driving true category management as well as having the right product, in the right place, at the right time requires process improvement consideration.

78%
of hospital staff face manual supply chain management

Source: RevCycle Intelligence
Supply Chain Use Cases Are Evolving

- Increase device utilization, notify staff when a bed is free, reduce emergency room wait time.

- Predict failure and enable digital twin simulation to avoid un-planned equipment downtime.

- Chatbots to assist caregivers to locate equipment or request inventory.

- React faster to supply chain events, recalls and drug authenticity.

- Enable smart contracts, HIE interoperability, alternative to EDI and secure data exchange.

21 minutes

Time spent by nurses per shift searching for lost equipment

Source: GE Healthcare
Connected and Intelligent Supply Chain

• Tomorrow’s healthcare supply chain, today

Improve Profitability
Your digital supply chain platform

Cost-driven
• Driven by value based care

Empowered people
• Reduce inventory costs through streamlined supply chain processes

• Achieve a patient centered supply chain by aligning operations to patient needs

Accelerate Innovation
Broader, better, faster insights and decisions

Demand-driven
• Driven by consumerism

Forward-thinking
• Anticipate changing healthcare needs by supporting innovation

• Detect anomalies, predict future states, and identify root causes to support rapid decision making

Shape Business Outcomes
Adaptive intelligent supply chain

Value-driven
• Driven by a changing population

Visionary
• Expand the digital thread by connecting all assets

• Enable a frictionless supply chain that easily adapts to evolving patient-centric strategies
The Patient-Centered, Care-Centric Supply Chain

These four areas will –

• Improve safety and effectiveness of care, addressing the needs of the patient to improve outcomes

• Increase access to care through optimization strategies across the continuum of care

• Provide continuity to help patients care for themselves away from a clinical setting

• Engage in continuous process improvement that drives value to the patient
Fundamental Reality Today and Questions to Ask

Common supply chain costs — clinician hoarding, upgrades and repairs, drug diversion, nonstandard ordering methods, and unnecessary product stockpiling

Supply chain not only about products, also about the people who buy, move, and use them

The human supply chain links — such as physicians, providers, manufacturers, and distributors — are failing to communicate cohesively and productively

Hospital executives need to be less focused on product price reduction and inventory streamlining and more attuned to the much larger supply chain picture

1. As a Supply Chain leader, am I ready to impact the Patient Experience & Outcomes?
2. Is my SCM solution powerful enough to enable transformation?
3. Am I prepared for the future of healthcare?
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