

2022

STRONGER

vizient. **CONNECTIONS** SUMMIT

Sept. 19–21, 2022

#vizientsummit

Supply Chain Executives and Leaders
Peer to Peer Meeting

Welcome From the Supply Chain Executive Network



Michael Darling

Vice President Supply Chain

Saint Lukes Health System



Brian Pollick

Administrative Director of Supply
Chain Management

University of Utah Hospitals and
Clinics



Carla Stephens

Sr Member Networks Director
Supply Chain

Vizient

Supply Chain Executive Network

A forum focusing on supply chain excellence to meet the challenges of the changing marketplace

It has never been more vital for supply chain executive leaders to form deeper relationships, on a national scale, with peers to discuss challenges and share insights in strategy, operations and improvement. This network provides a platform for professionals to interact and learn from each other using member-driven data and education connections regularly throughout the year.

The power of membership

Network participants connect to develop supply chain excellence through **integration, elevation and optimization** of the healthcare supply chain.

Network target audience

Senior, system-level supply chain executives are invited to participate in the network. Member organizations include academic medical centers, integrated delivery systems and mid-size hospitals/health systems.

2022 featured topics

- Demand planning, supply chain visibility/resilience, logistics 2.0
- Digital supply chain and platforms for enterprise integration
- Workforce optimization
- Spend management strategies
- Value generation/commercialization
- Leadership development

Network experience

- Virtual and in-person meetings
- Secure Vizient Community platform to connect with peers
- Supply Chain eConnect news communication
- Trending Topic Calls
- Leadership Series

For more information, contact [Karen Kresnik](#).

Supply Chain Executive Network Advisory Committee



Teresa Dail
Chief Supply Chain Officer
Vanderbilt University Medical
Center System



Grace Jackson
System VP & Chief
Purchasing Officer
Premier Health



Micah Parker
Vice President, Supply Chain
INTEGRIS Health



Michael Darling
SCEN Chairman
Vice President, Supply Chain
Saint Luke's Health System



Jerry Kostal
System Director, Supply Chain
Methodist Health System



Brian Pollick
SCEN Vice Chair
Administrative Director,
Supply Chain Management
University of Utah



Motz Feinberg
Vice President, Supply Chain
Cedars-Sinai Health System



Lorra Miracle
Enterprise Director, Supply
Chain Management
University of Kentucky Health
System



Carl Tietjen
AVP, Purchasing & Supply
Chain
University of Rochester



Brian Murray
Ass't Vice President, Supply
Chain Procurement
NorthShore University
HealthSystem

2022 Supply Chain Network Opportunities



Vizient Connections Education Summit & Fall Network Meeting

Save the Date | Sept. 19-22, 2022

SCEN Connections

Mar. 10, June 23, Dec. 6

Supply Chain Leadership Series

Spotlight on Managing Spend in Clinical Procedural Areas

Top performers in price management, purchase management, purchase standardization, transaction efficiency

Date	Program
May 10	Spotlight on Managing Spend in Clinical Procedural Areas
Nov. 1	Spotlight on Managing Spend in Clinical Procedural Areas

Spotlight on Supplier Diversity

Leading practices growing relationships with minority, woman and veteran business enterprises (MWVBEs)

Date	Program
Mar. 3	Spotlight on Supplier Diversity
June 15	Spotlight on Supplier Diversity
Aug. 16	Spotlight on Supplier Diversity

Strategic Supplier Relationships Collaborative

Informational webinar Oct. 6

Enroll by Nov. 4

Clinical Supply Integration Learning Series

Virtual Session:

Date: November 8, 12-1p.m. CT



For more information, contact Carla Stephens at Carla.stephens@vizientinc.com

#vizientsummit

Vizient Networks Presentation | 2022 | Confidential Information



Vizient Community Mobile App

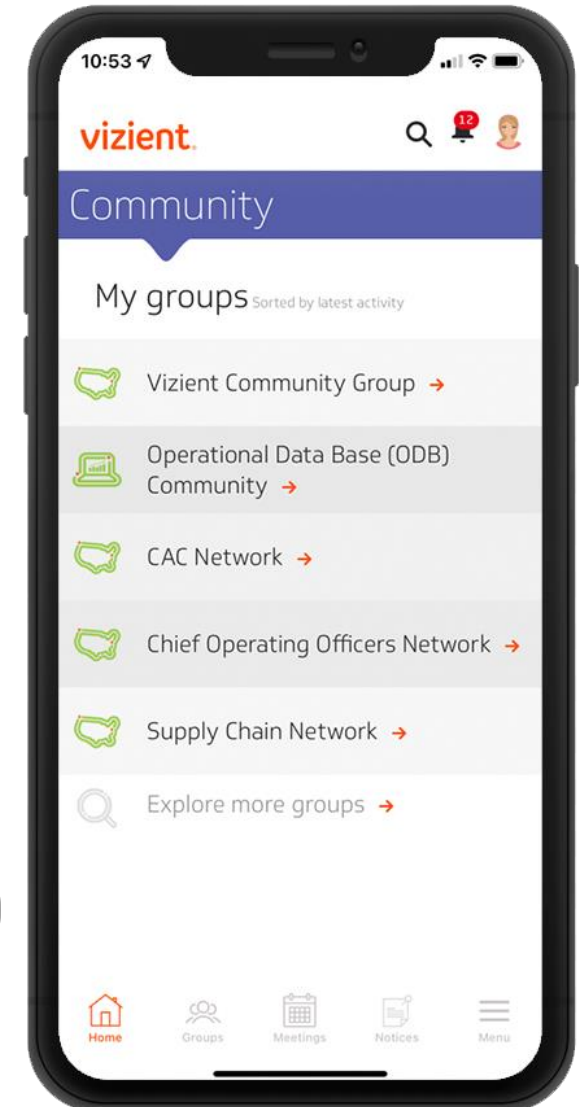
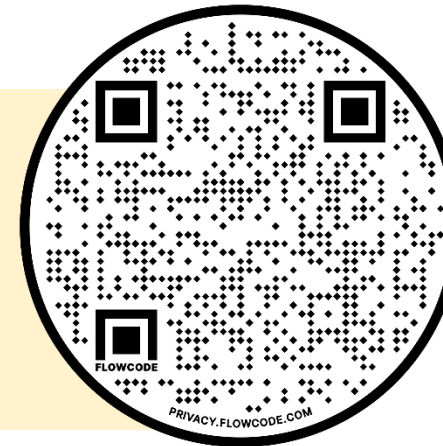
Access the power of the **Supply Chain Network** and **Supply Chain Executive Network Community** in the palm of your hand!

With the new mobile app:

- Easy to log in – biometrics unlocks the app
- Quickly review push and in-app notifications – don't rely on emails
- Tap from the member profile to call or email directly
- Create a query, respond to peers and more

Next steps:

- Scan the QR code or search for 'Vizient Community' in your app store to download and log in
- Stay connected and network with peers on the go



Today's Agenda

Time	Session title	Speakers
8:00 AM	Welcome to the Summit Supply Chain Executives and Leaders Peer to Peer Meeting	<i>Michael Darling, Vice President Supply Chain, Saint Lukes Health System Brian Pollick, Administrative Director of Supply Chain Management, University of Utah Hospitals and Clinics Carla Stephens, Sr Member Networks Director, Vizient</i>
8:10 AM	Vizient Spend Management Strategy & Discussion	<i>Simrit Sandhu, EVP, Strategic Transformation & Clinical Supply Solutions, Vizient John Grande, Group SVP, GPO Services & Delivery, Vizient</i>
8:45 AM	Politics and Policy in DC – How Federal Policy Impacts Providers	<i>Shoshana Krilow, SVP, Public Policy & Government Relations, Vizient</i>
9:15 AM	Using the Power of Purchasing to Drive Health Equity and Economic Impact: Panel	<i>Simrit Sandhu, EVP, Strategic Transformation & Clinical Supply Solutions, Vizient Shaleta Dunn, AVP, Member Diversity & Community Initiatives, Vizient Charlene Vickers, Director of Supplier Diversity and Inclusion, Johnson & Johnson Allison P. Corry, VP of Support Services & Chief Supply Chain Officer, Intermountain Healthcare Jorge F. Hernandez, VP Supply Chain Services and Chief Procurement Officer, Broward Health</i>
9:50 AM	Roundtable Discussion	
10:15 AM	Networking Break	
10:30 AM	Medical Device Industry Trends	<i>Travis Steed, US Equity Research, Medical Supplies & Devices, Bank of America Securities</i>
11:15 AM	Tech Watch Presentation and Discussion	<i>Justin Hibbs, VP, Business Development & Strategy, Aptitude Lisa McGuire, Associate Principal, Intelligence, Sg2</i>
12:00 PM	Adjourn & Lunch	<i>Michael Darling, Vice President Supply Chain, Saint Lukes Health System Brian Pollick, Administrative Director of Supply Chain Management, University of Utah Hospitals and Clinics Carla Stephens, Sr Member Networks Director, Vizient</i>

Disclosure of Financial Relationships

Today's panelists have nothing to disclose

Learning Objectives

- Discuss industry insights and optimization strategies for supplier diversity programs
- Identify leading practices for provider organizations and strategic benefits of supplier diversity programs
- Describe how industry insights and leading practices among supply chain leaders and staff contribute to operational efficiencies and the advancement of supply chain strategy

Vizient Spend Management Strategy & Discussion

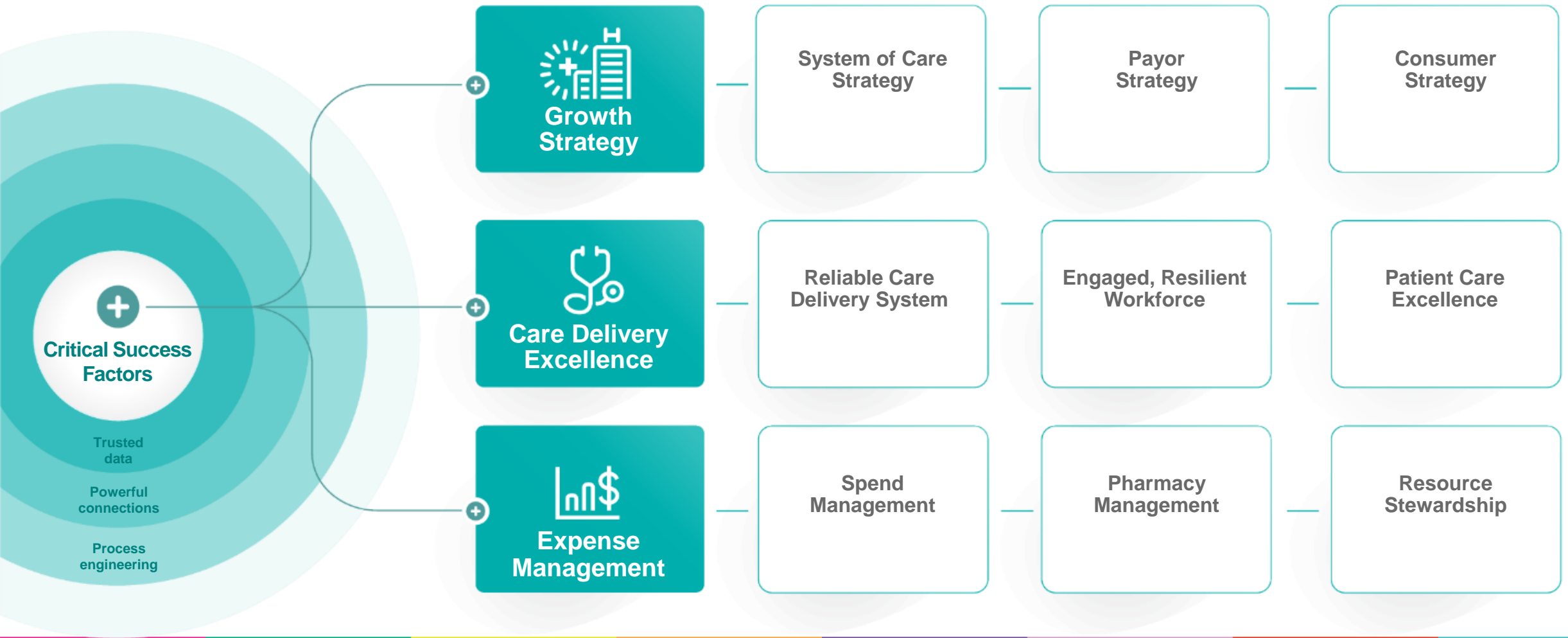


Simrit Sandhu
EVP, Strategic Transformation &
Clinical Supply Solutions, Vizient

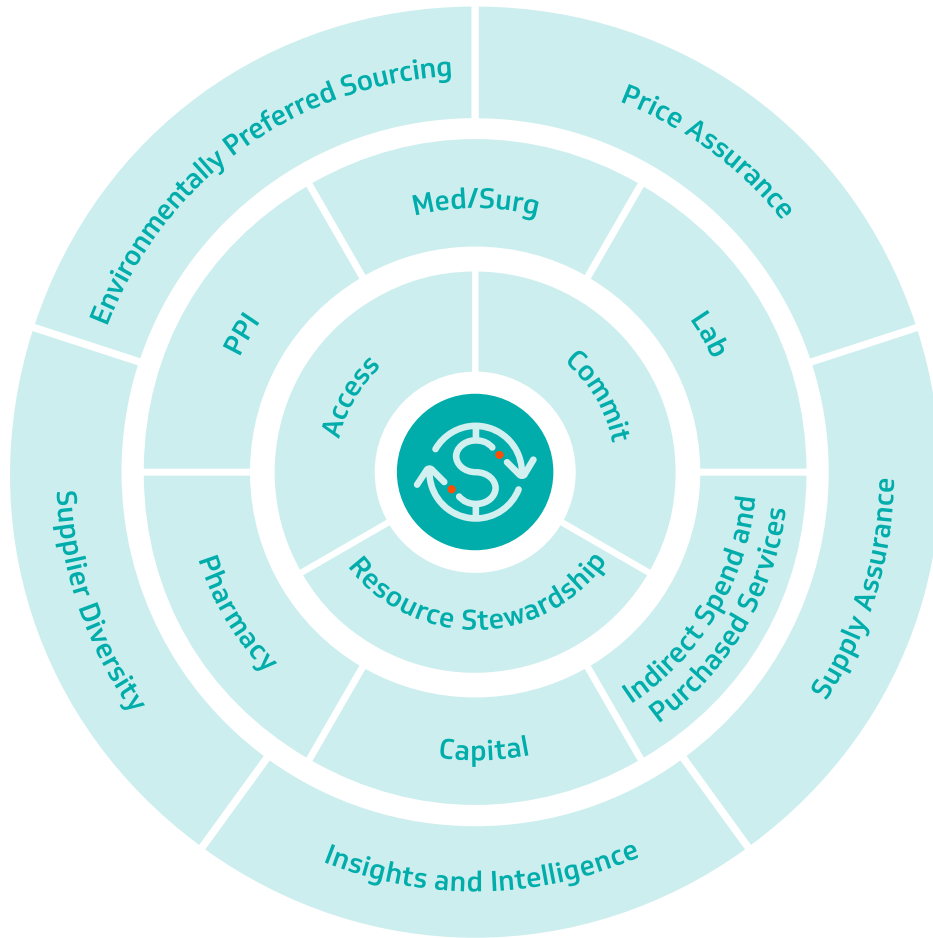


John Grande
Group SVP, GPO Services &
Delivery, Vizient

Enabling high performance through three focus areas



Spend Management – our go-forward vision



- Vizient’s full-continuum spend management services across all provider non-labor expense categories will:
- Activate greater member reinvestment in communities, clinical care, operations and growth
- Align with individual member needs, strategic goals and priorities through end-to-end spend solutions
- Integrate data, technology and expertise to deliver value enabled by core, programmatic tenets of the GPO
- Advance in impact with support and optimization by a dedicated Spend Management Delivery Team

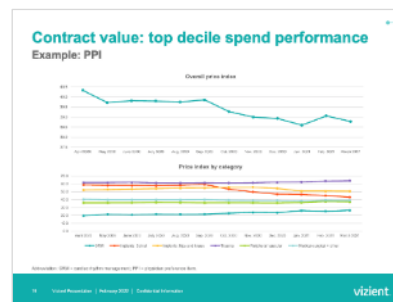
Goal: Help organizations maximize the impact and efficiency of every dollar they spend

Spend Management Strategy

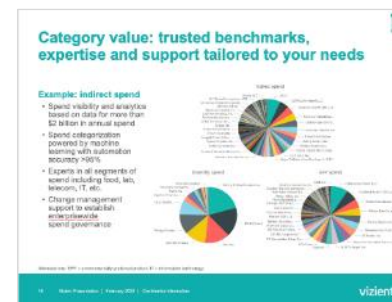


- The center ring is not a life cycle illustration. A member does not start at one section and move to the other. A member can straddle, be in all, or one section in different categories that are not mutually exclusive.
- **Access** – is the basic level of our core GPO membership offering. Price, access, and supply resiliency
- **Commit** – is a deeper relationship that maximizes category value
- **Resource Stewardship** – is aligned price, operational and clinical performance to maximize the impact of every dollar

Access
\$



Commit
\$\$



Resource stewardship
\$\$\$



Access, commit, resource stewardship



Vizient Clinical Data Base

Transparent clinical benchmarks and resource utilization insights

97% Academic medical centers
1,075+ Complex teaching and community hospitals

Clinical Practice Solutions Center®

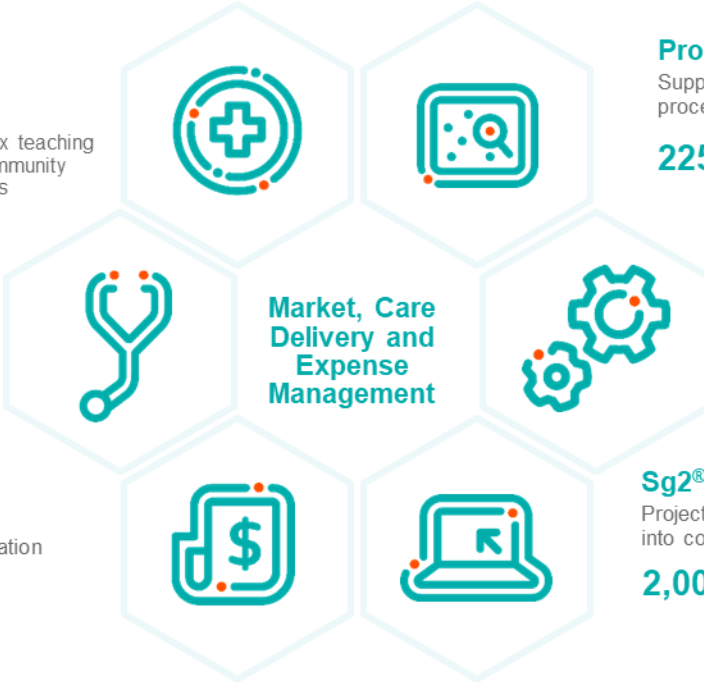
Physician practice clinical, revenue cycle and operational insights

95+ Provider organizations

Supply and pharmacy analytics

Identifies savings and standardization opportunities, benchmark pricing, and utilization of supply and pharmacy products

\$208B+ in supply and pharmacy volume analyzed each year



Procedural Analytics (PA)

Supply utilization and outcomes for procedural settings; launched in late 2018

225+ Subscribing facilities

Vizient Operational Data Base

Comparative operational reporting for budgeting and cost reduction

675+ subscribing members

Sg2® market analytics

Projected growth by service line and insight into consumer movement and referral patterns

2,000+ facilities

Example of resource stewardship

Q&A scorecard highlights orthopedics service line and spinal fusion opportunities



Ortho and Spine sub-service lines

Opportunity in mortality, readmissions and direct cost

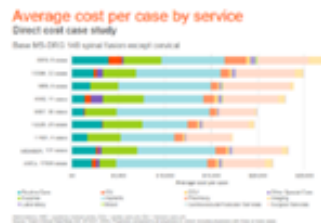
Sub-service line	Cases	LOS index	Mortality index	30-day readmit %	Direct cost index	Direct cost instance
Sp. Other	54	9.53	8.94	7.9%	1.07	\$432,716
Spinal Fusion	334	9.56	8.94	11.2%	1.05	\$2,306,151
Sp. Replacement/Revision	307	9.54	1.26	9.2%	1.45	\$1,064,202
Cervical Spine, Fusion	122	9.50	3.80	10.2%	1.27	\$711,839
Orthopedics - Other	225	9.59	1.26	14.0%	1.55	\$1,163,896
Knee Replacement/Revision	263	9.52	9.55	8.5%	1.42	\$1,206,721
Upper Extremity Replacement/Revision	65	9.67	9.55	3.1%	1.26	\$166,327
Spinal Surgery - Other	128	9.56	9.55	9.7%	0.70	\$261,303
Amputations	43	9.58	9.55	10.6%	1.19	\$52,881

Quality and Accountability Dashboard is the gold standard performance measurement offering transparent benchmarks and trusted, member-defined methodologies.

Spinal fusion insights identify cost and utilization opportunities in both implants and pharmaceuticals

Service	Facility A
Total supply expense* per SIS2-adjusted discharge	\$1,765
Inpatient drug expense per PS-weighted discharge	\$541
Blood expense per SIS2-adjusted discharge	\$118
Cardiology medical supply expense per APC	\$45
Imaging medical supply expense per APC	\$10
Lab medical supply expense per CMS-weighted lab-adjusted discharge	\$64
Surgical services medical supply expense per CMS-weighted case	\$753

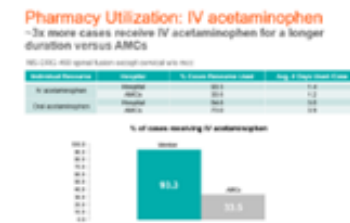
High supply expenses per SIS2-adjusted discharge



Meaningful variation in direct spinal fusion case costs by physician



Sizeable variation in implant costs by physician



Significantly higher IV acetaminophen use versus peers

Supply insights fuel a sophisticated category strategy to reduce implant costs and rationalize suppliers and SKUs



Price index underscored implant cost variability and optimal supplier negotiation

Implant Pricing			
Price variability by vendor drives spinal implant pricing opportunity			
Manufacturer	Price Index	Price Variability	Price Opportunity
DePuy Synthes	9.5	10.0%	10.0%
Medtronic	9.5	10.0%	10.0%
Stryker	9.5	10.0%	10.0%
Zimmer Biomet	9.5	10.0%	10.0%
Other	9.5	10.0%	10.0%

Visibility to SKU utilization helped create a holistic sourcing strategy



Ongoing market share management maximized the value of commitment

Category-based managed services

Powered by data-driven insights



- Vizient's spend management approach is far more than just a portfolio of contracts
 - We enable members to maximize the impact of every dollar they spend by combining:
 - Deep category expertise
 - Category specific automation and workflow solutions
 - Analytics and Insights

Spend Management Framework and the Digital Supply Chain

Spend Management Framework

Level 1 – Member Engagement

Level 2 – Spend Management Category

Level 3 – Core Tenets and Foundational Support

Digital Supply Chain

For each spend area in level 2, we are pursuing **build/buy/partner options** to enable category specific, expert led solutions to meet member needs end to end



Data Management:

Spend Capture	Master Data
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Spend Management:

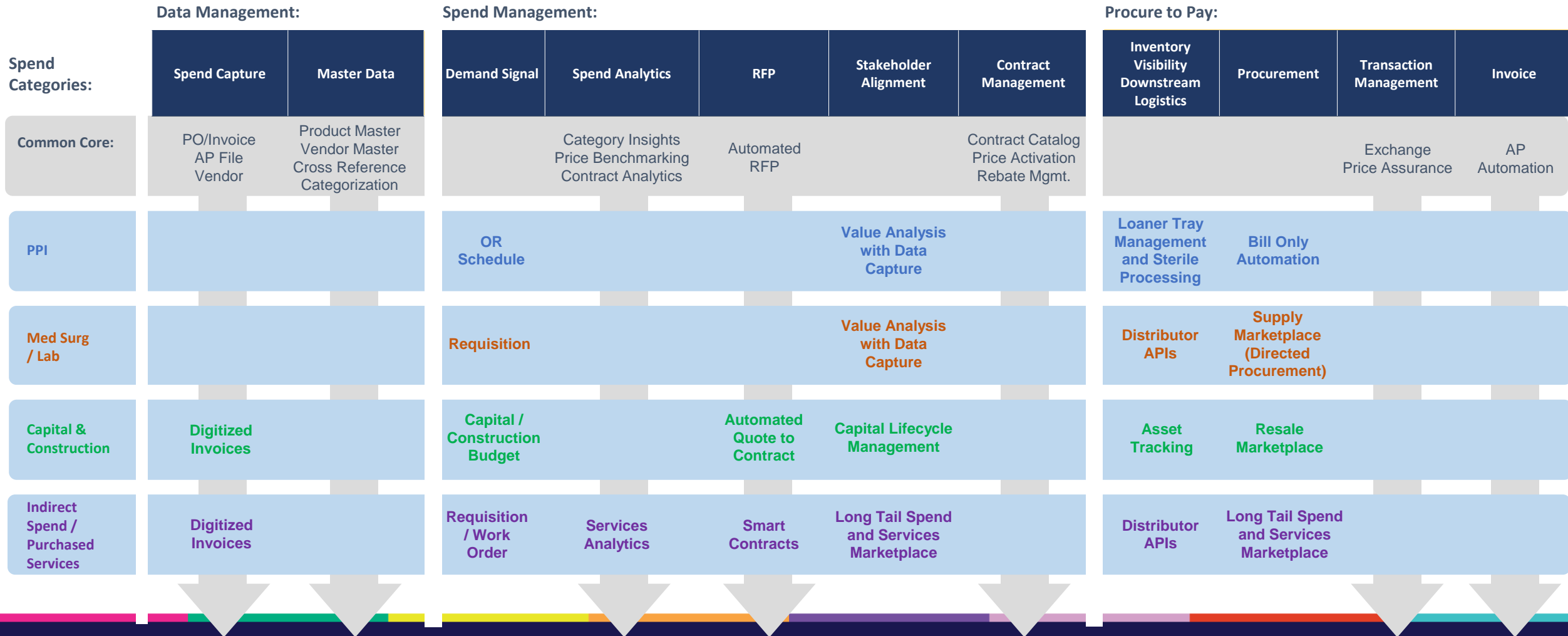
Demand Signal	Spend Analytics	RFP	Stakeholder Alignment	Contract Management
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Procure to Pay:

Inventory Visibility Downstream Logistics	Procurement	Transaction Management	Invoice
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Common Core:	PO/Invoice AP File Vendor	Product Master Vendor Master Cross Reference Categorization	Category Insights Price Benchmarking Contract Analytics	Automated RFP	Contract Catalog Price Activation Rebate Mgmt.	Exchange Price Assurance	AP Automation
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Digital Supply Chain – Capability Map

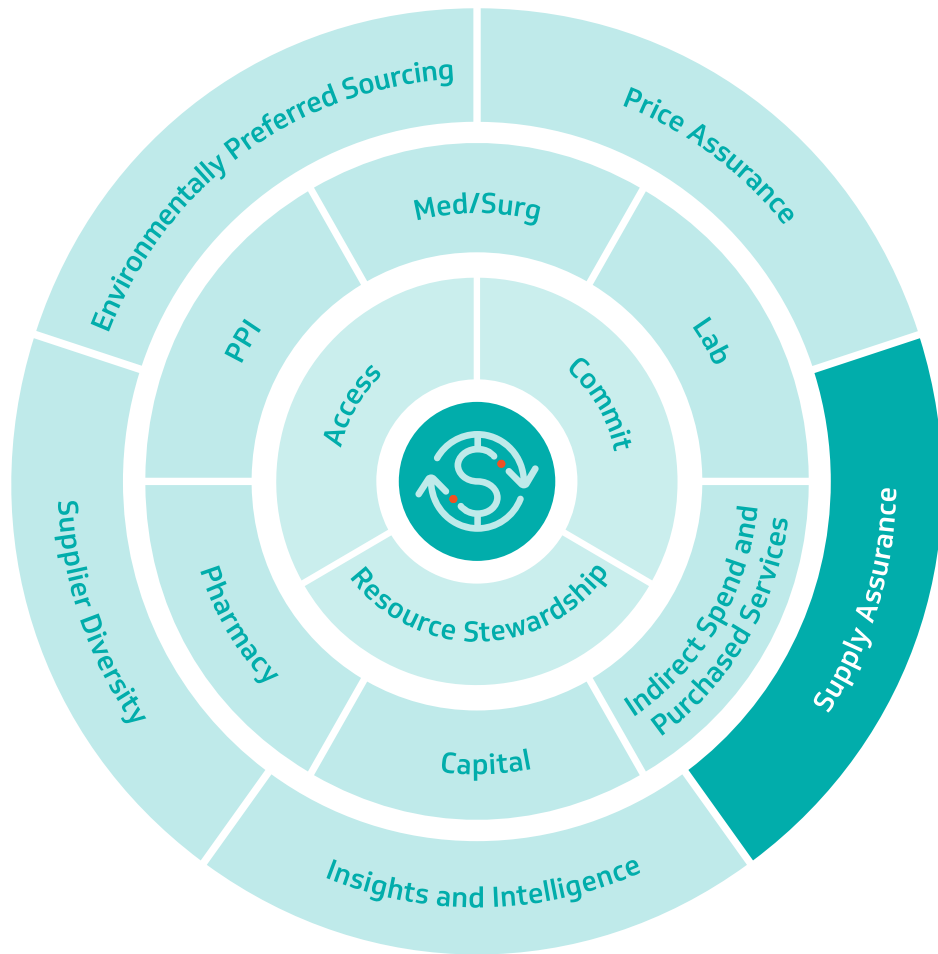


Spend management core tenets



- **Insights and Intelligence** – Providing members and suppliers actionable insights and Intelligence that help with strategic planning and leads to measurable results
- **Supply Assurance** – confidence that the supply chain will produce and deliver supplies necessary to meet demand. Empowering providers, distributors and suppliers to collaborate to solve for disruptions and strengthen the supply chain through insights, access, enablement and advocacy
- **Price Assurance** – working with suppliers, members and supply analytic insights to help ensure value is accessible, regardless of market dynamics
- **Supplier Diversity** – connecting members to diverse suppliers, data and expertise for a healthy community and economic development goals
- **Environmentally Preferred Sourcing** – leveraging environmental and social impacts that benefit business through innovative solutions

Supply assurance overview

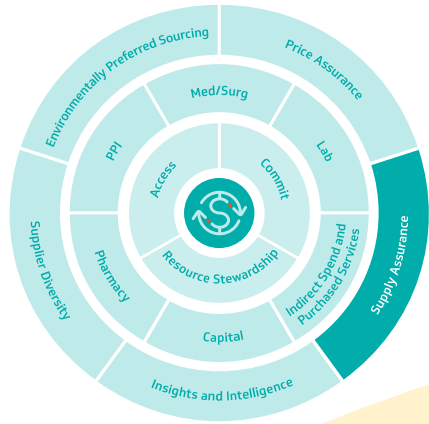


- Vizient's supply assurance solutions will **enhance our members' ability to manage disruption risk and improve confidence in supply availability.**
- Increase transparency into supply chain processes, raw materials, manufacturing locations, sterilization locations and distribution logistics
- Monitor leading indicators and vulnerabilities to allow for proactive forecasting and modeling of potential disruptions
- Generate market intelligence framing the member exposure, potential product alternative and relevancy to patient care
- Equip members with timely, actionable information and solutions unique to their purchase history
- Strengthen supplier and provider relationships to address continuity for patient care through ongoing mitigation strategies and planning, allowing for increased collaboration



Goal: Develop transparency through actionable insights and solutions, allowing members to focus on delivering uninterrupted patient care

Supply assurance journey



Foundation Fundamental expectations

- Subject matter expertise
- Secure manufacturing and raw material locations where available
- Event monitoring and supplier risk management through partnership with SRS
- Economist resources
- Member, supplier and distributor data



Enrichment Resource expansion

- Validating supplier-provided data with supplier publicly available information
- Category management strategies
- Clinical solutions
- Strategic programs
- Health equity/vulnerability Index analysis
- Cross-referencing



Integration Visibility and alignment

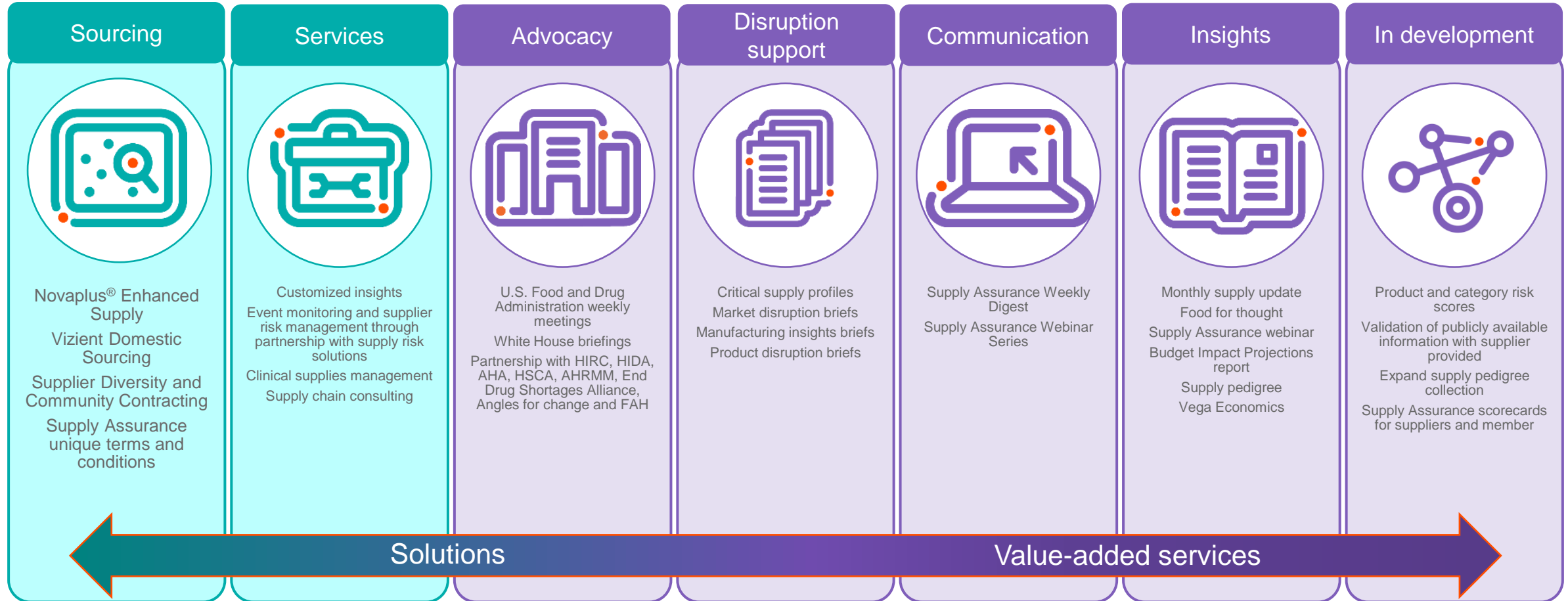
- Unique supply assurance scorecard for products, categories, suppliers and members
- Category insights
- Budget impact projections reporting
- Preference cards
- Clinical Data Base



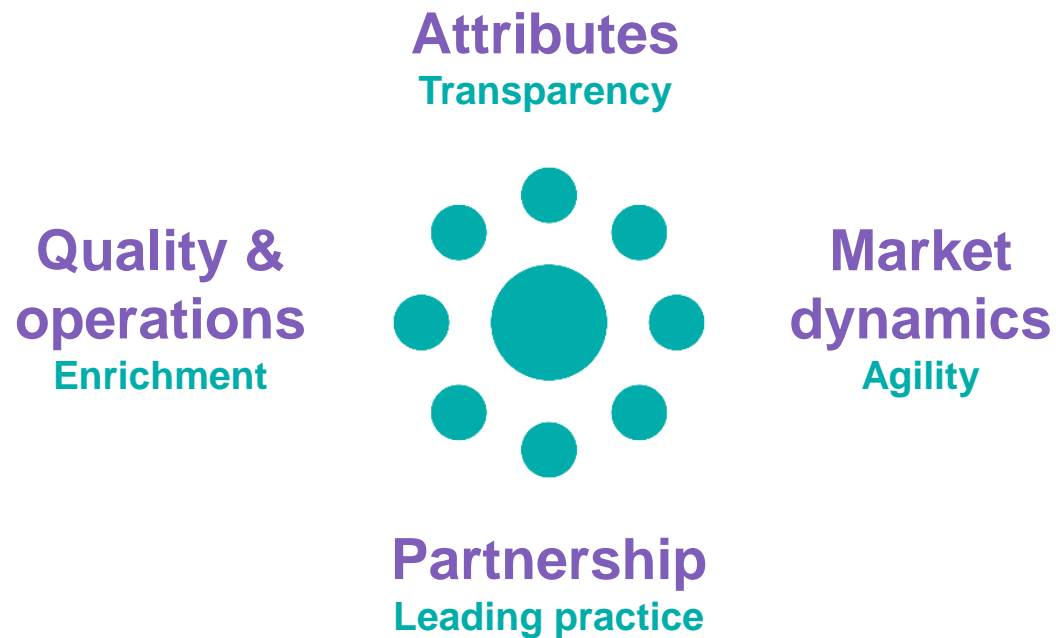
Leading practice One Vizient

- Proactive notifications unique member to purchase history
- Reinforce leading practices through demand planning
- Relay and exchange conservation strategies
- Monitor and apply critical supply profiles
- Natural disaster best practices and resource guides

Supply assurance solutions and services



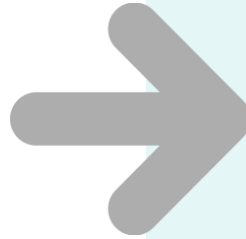
Our developing Supply Assurance Score



Vizient is committed to advance reliable care & quality through:

- Product, service and supplier level insights
- Informed, agile decision-making
- Emphasis on transparency, alternatives and partnerships
- Local resiliency strategies

Vizient Member Engagement Model & Spend management delivery



Our Spend Management Delivery Team ensures optimization and alignment of Vizient spend management services with Member needs, strategic goals and priorities identified by our Member Engagement Teams (METs) by:

Member and Vizient executive sponsors			
Member Performance Principal <ul style="list-style-type: none">• Drives and facilitates relevant connections to ensure strategies are achieved• Creates custom plans that align with the member's strategy and objectives• Serves as the primary point of contact for the member's C-suite team			
Spend Management Lead <p>Manages a cross-functional team to drive performance through spend management services, supply chain operations and other non-labor solutions.</p>	Pharmacy Enterprise Lead <p>Aligns with pharmacy leadership to focus on drug costs and efficacy at the member organization.</p>	Operations and Quality Lead <p>Delivers actionable integrated insights that combine quality, operational and utilization performance to better determine priorities to improve quality outcomes.</p>	Strategy Lead <p>Helps stabilize, adapt and evolve in today's uncertain environment, providing expert intelligence, data-driven insights and strategic perspective to drive long-term success and to understand the market potential.</p>

- *Purposefully* advancing collaboration and consistency in the delivery of expert-led spend management services,
- *Boldly* advising our Members on their performance across core tenets, aligned to broader health system priorities, enabled by insights and industry-leading programs,
- *Inclusively* partnering with Members and Suppliers to address the clinical, operational and supply chain requirements unique to every spend category,
- *Accountably* focusing on Member performance and value.

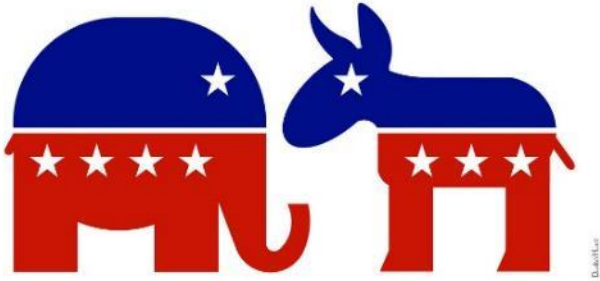
Politics and Policy in DC: How Federal Policy Impacts Providers



Shoshana Krilow

SVP, Public Policy & Government
Relations, Vizient

Vizient D.C. Team – Public Policy & Government Relations



Non-Partisan

Vizient Policy Priorities

- Efficiency and value in health care delivery
- 340B Drug Pricing Program
- Hospital outpatient department site-neutral payment policies
- Graduate medical education
- Prescription drug shortages
- Prescription drug pricing
- Biosimilars
- Telehealth
- Tariffs/trade policy
- Non-profit health care tax exemption
- Quality measurement
- Cybersecurity
- Supply chain resiliency
- Workforce challenges
- Health equity



How Can We Help You?

- **Washington Update Newsletter** – Bi-weekly email newsletter covering developments from Capitol Hill and the regulatory agencies, and how they may impact hospitals.
- **Public Policy Updates** – Deliver in-person or virtual updates to member hospitals.
- **Connecting with Policymakers** – Connect members to officials on Capitol Hill or in the Executive Branch agencies.
- **Legislative and Regulatory Summaries** – Provide summaries of emerging legislative and regulatory issues.
- **Answering Questions** – We answer questions or conduct research into legislative or regulatory issues.



Quick Recap...

The Provider Narrative...Isn't Good

The Headline

CDC: Pandemic onset reversed gains on drug-resistant infections caught in hospitals

Nonprofit hospitals' community benefits should square with their tax exemptions. They often don't.

51% OF HOSPITALS STILL NOT ADHERING TO PRICE TRANSPARENCY LAWS

Despite the No Surprises Act, surprise bills are still common

Enforcement Activity in June Reflects Increased Antitrust Scrutiny of Hospital and Private Equity Deals

The Takeaway

Hospitals do NOT wear the “White Hat” – not among policymakers, the media or consumers

Key Health Provisions in Inflation Reduction Act

- **Requires HHS to establish a Drug Price Negotiating Program for high-cost drugs without competition:**
 - Negotiations begin in 2023 – with prices taking effect in 2026.
 - Negotiations would be limited to 10 drugs in 2026, increase to 15 in 2027 then up to 20 drugs by 2029 (**and will ultimately include both Part B and D drugs**).
- **Biosimilar bonus payments** (ASP+8% of originator biologic) for 5 years.
- Temporarily extends the **enhanced ARPA subsidies** to purchase health insurance through the ACA's marketplace through 2025.
- Medicare Part B and D **rebates when drug prices increase faster than inflation**
- **Insulin cost-sharing** caps in Medicare Part D
- **\$2,000 out-of-pocket max** in Medicare Part D and other reforms
- Significant **funding for environmental investments** – some of which hospitals may benefit from



What Does it Really Mean for Providers?



State-of-Play

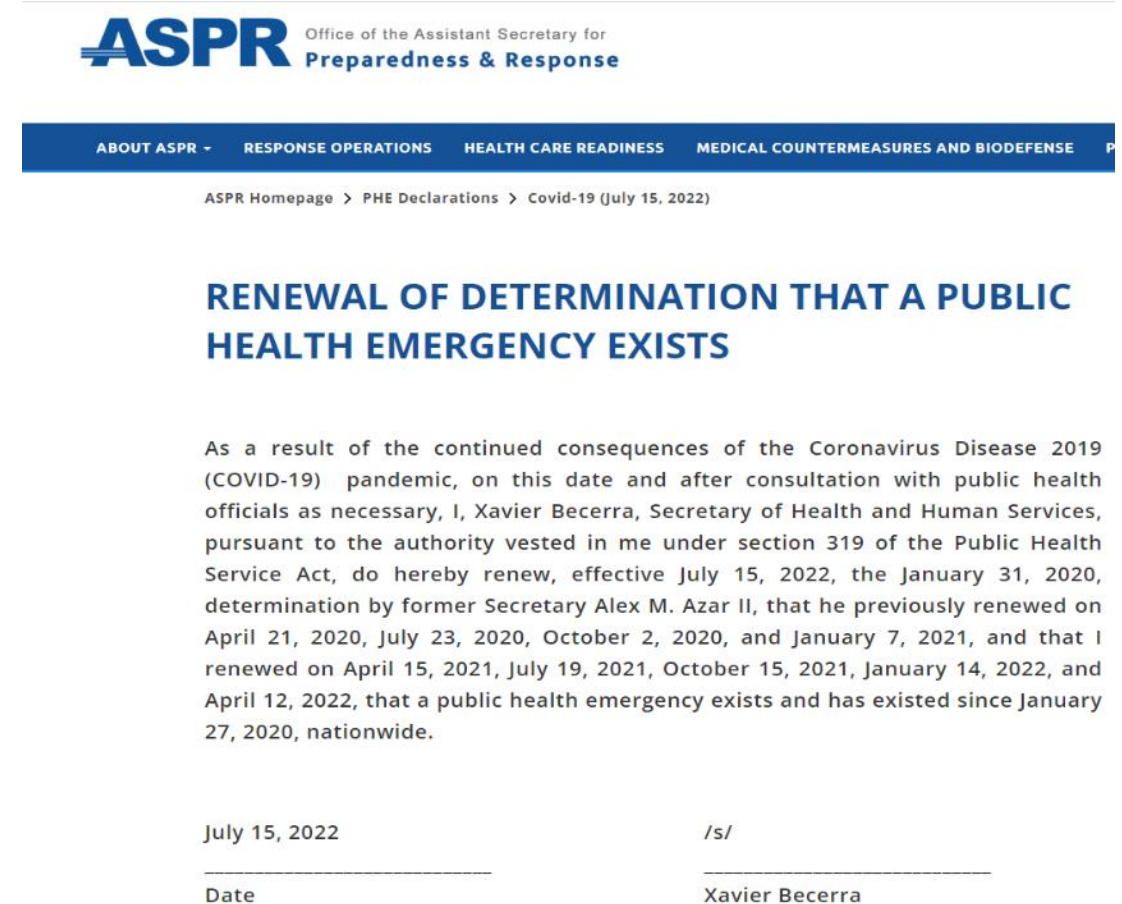
Reimbursements Facing Headwinds Despite Historic Challenge

- **Medicare sequestration:** 2% sequestration cuts resumed fully on July 1
- **Provider Relief Fund:** Exhausted. Provided funding for expenses and lost revenues before July 1, 2021 (meaning no accounting for Delta or Omicron waves)
- **Medicare PAYGO Payment Cuts:** - 4% without Congressional action
- **Final IPPS:** Historic +4.1% increase – but offset by reductions to outlier payments and other adjustments = only 2.6% increase
- **Proposed PFS:** - 4.42% absent Congressional action
- **AAPP Loan Repayment/Recoupment in progress...**

COVID-19 Public Health Emergency Extended

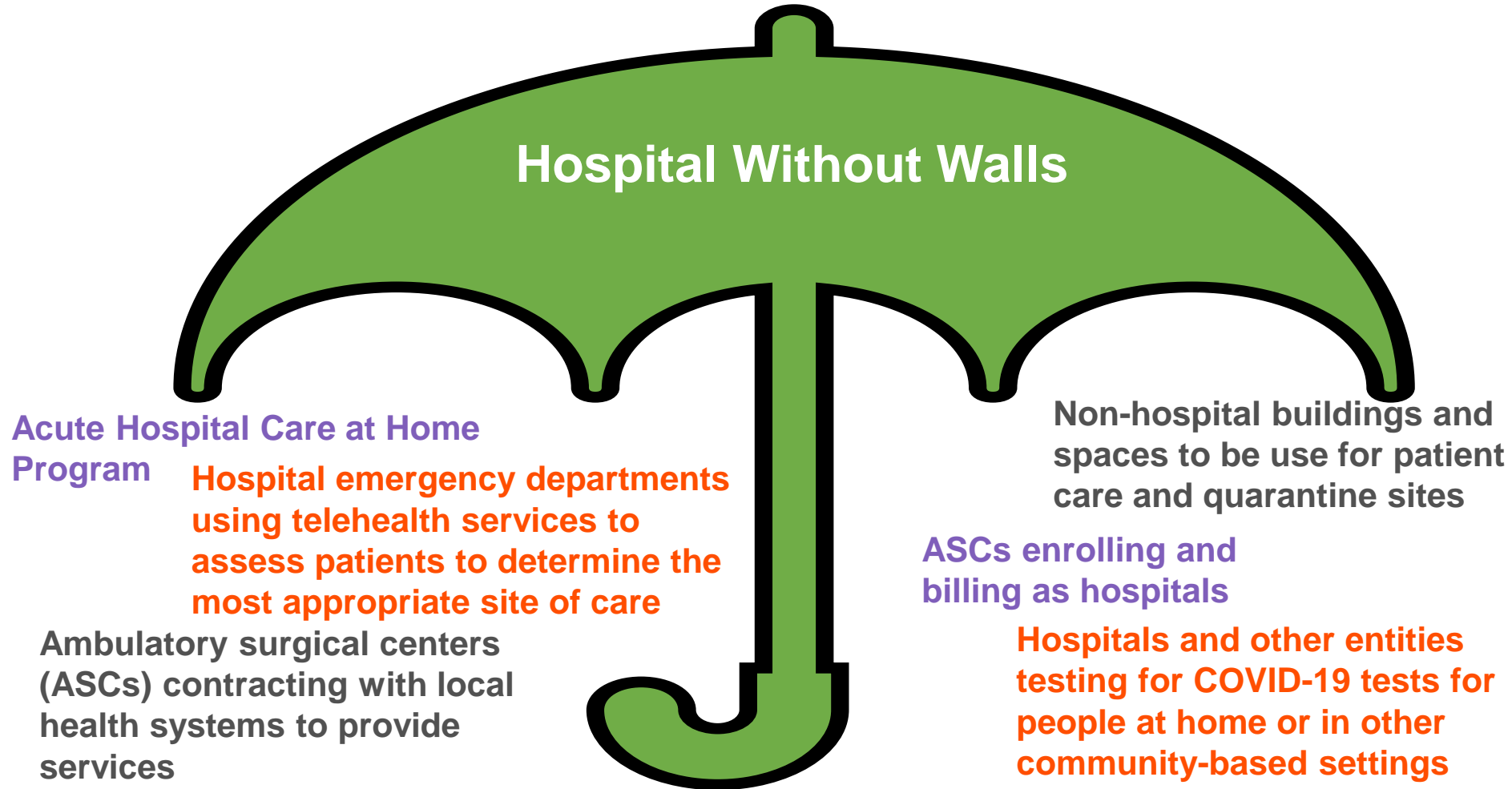
The PHE declaration is critical to ensuring COVID-related flexibilities remain in place.

- HHS Secretary Becerra extended the COVID-19 Public Health Emergency (PHE) for an additional 90 days in July
- PHE remains in effect until October 16, 2022
- Sec. Becerra committed to 60-days notice to states before ending PHE (August 16)...no notice was given so PHE likely extended again



The screenshot shows the ASPR (Office of the Assistant Secretary for Preparedness & Response) website. The header includes the ASPR logo and navigation links: ABOUT ASPR, RESPONSE OPERATIONS, HEALTH CARE READINESS, and MEDICAL COUNTERMEASURES AND BIODEFENSE. The breadcrumb trail reads: ASPR Homepage > PHE Declarations > Covid-19 (July 15, 2022). The main heading is "RENEWAL OF DETERMINATION THAT A PUBLIC HEALTH EMERGENCY EXISTS". The body text states: "As a result of the continued consequences of the Coronavirus Disease 2019 (COVID-19) pandemic, on this date and after consultation with public health officials as necessary, I, Xavier Becerra, Secretary of Health and Human Services, pursuant to the authority vested in me under section 319 of the Public Health Service Act, do hereby renew, effective July 15, 2022, the January 31, 2020, determination by former Secretary Alex M. Azar II, that he previously renewed on April 21, 2020, July 23, 2020, October 2, 2020, and January 7, 2021, and that I renewed on April 15, 2021, July 19, 2021, October 15, 2021, January 14, 2022, and April 12, 2022, that a public health emergency exists and has existed since January 27, 2020, nationwide." The date "July 15, 2022" is signed below the text, and "Xavier Becerra" is signed below the signature line.

Pandemic-related Flexibilities Increased Capacity



Telehealth – Key Updates

Regulatory: CY 2022 PFS Final Rule

- Permanently added services to the telehealth list (e.g. group psychotherapy, visit complexity inherent to certain office/outpatient E/M, prolonged services)
- Created “Category 3” for telehealth services temporarily covered until the end of the CY in which the PHE ends
- Allowed direct supervision using real-time interactive audio and video technology through the end of the CY in which the PHE ends
- Implemented law expanding access to telehealth mental health services

Legislative: FY 2022 Omnibus

- Extended some pandemic telehealth flexibilities for 151 days after the end of the declared PHE, including:
 - Removal of geographic requirements and expansion of originating sites for services
 - The furnishing of audio-only telehealth services
 - Delays the six month in-person requirement for mental health services provided via telehealth

Regulatory: CY 2023 PFS Proposed Rule

- Adds 50+ codes to Category 3 and CMS-proposed prolonged visit codes to Category 1 of the telehealth list
- Four new codes for remote therapeutic monitoring (RTM) related to non-physician healthcare professionals furnishing RTM services
- Implements FY 22 Omnibus provisions by delaying (for 151 days) the requirement of an in-person visit when telehealth mental health services are provided

Outstanding Advocacy Priorities:

- Permanently lifting geographic and originating site restrictions
- Access to audio-only telehealth
- Ensuring adequate reimbursement for telehealth services
- Transitioning services from Category 3 to Category 1 of the telehealth list

Vizient endorsed the *Creating Opportunities Now for Necessary and Effective Care Technologies (CONNECT) for Health Act of 2021* which, among other provisions, would make permanent several telehealth flexibilities provided during the pandemic

Other Hot Issues on the Hill



FDA UFA Reauthorization

Fees must be used only for human drug and device approval activities

House and Senate must work out key differences

Possible inclusion of supply chain resilience proposals - Vizient priorities include increased transparency



End of Year Rush

Government Funding – expires Sept. 30

Supply Chain – PREVENT Pandemics Act?

“Extenders” – MDH/LVA



Mental and Behavioral Health

Several committees developing bipartisan mental health legislation. Focusing on:

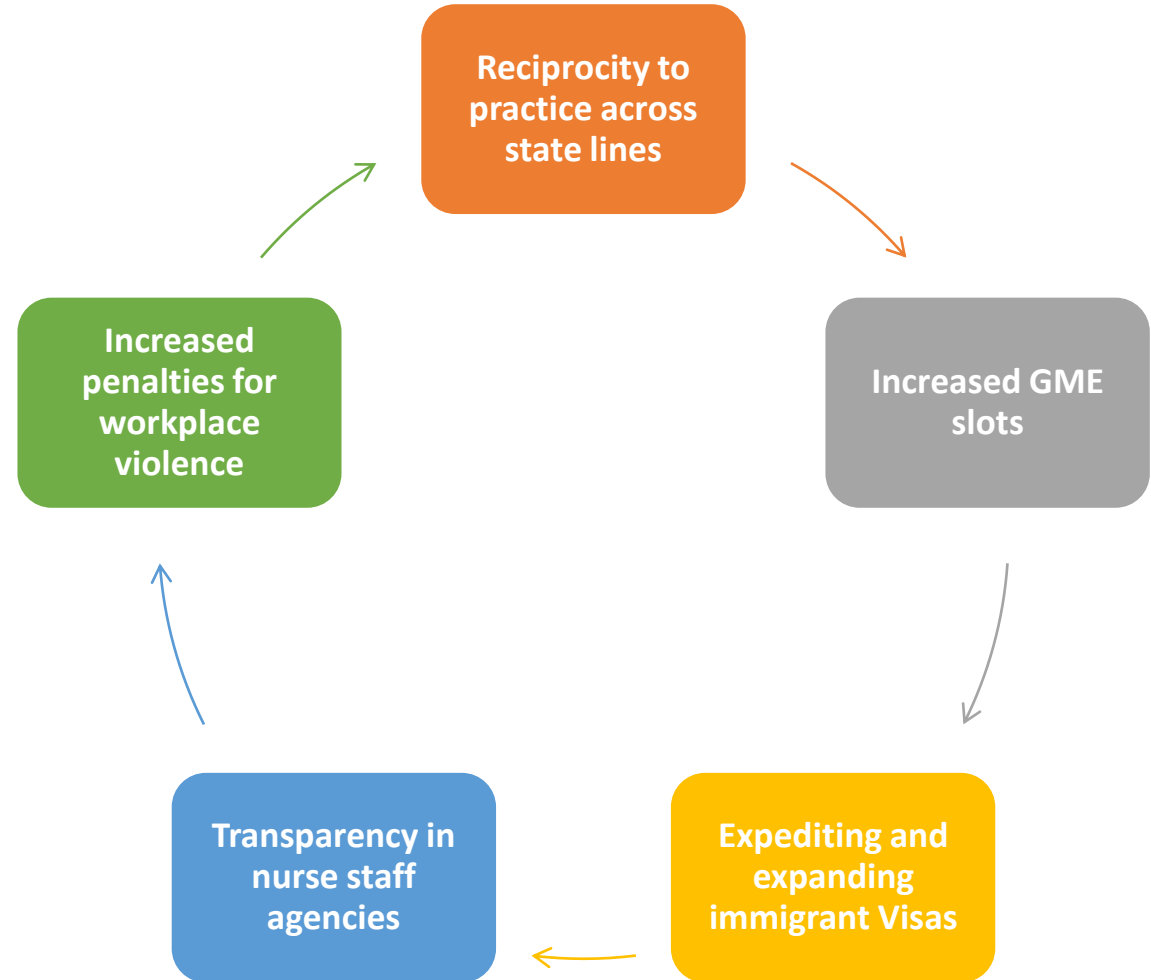
- Workforce
- Care Coordination
- Parity
- Telehealth
- Access for children

Workforce Policy – Many Proposals, Little Immediate Impact



Politics

- Limited regulatory oversight levers; little interest in providing \$\$
- Unions challenging “shortage” rhetoric
- Immigration is...complicated.
- Urban v. rural dilemma
- Consensus: this is hospitals’ issue to solve



340B Drug Pricing Program Under Attack

Manufacturers Raising Challenges for 340B Contract Pharmacies

- Since July 1, 2020, manufacturers have taken three approaches that may pose a threat to 340B covered entities.
 - Requesting/requiring covered entities to provide their claims data from contract pharmacies to access 340B prices.
 - Limiting number of contract pharmacies to one per Covered Entity.
 - Providing 340B discounts via a rebate model. Covered entities would purchase at wholesale acquisition cost (WAC) and be required to submit for a 340B rebate through a third party.
- HHS has issued warning letters and enforcement actions targeting drug makers.
- Litigation is underway in multiple lawsuits, including several drug makers, seeking to clarify HHS's authority to enforce 340B guidance.
- **More than 180 bipartisan lawmakers wrote OIG, asking them to impose civil monetary penalties on manufacturers.**



340B Making a Comeback?

- CMS has been implementing payment cuts of ASP -22.5% (from ASP + 6%) since Jan. 1, 2018, for separately payable, non-pass-through drugs and biologicals (other than vaccines) purchased through the 340B Drug Pricing Program.
- After several years of litigation, SCOTUS ruled in favor of hospitals, finding that HHS exceeded its authority in implementing these payment reductions.
- The CY 2023 OPPS Proposed Rule KEEPS cuts, but Agency said they will **finalize ASP + 6%** and seeks comments on how to reimburse providers.
 - Notable that they seek feedback on all years of payment reductions, not just 2018/2019 as ruled on by SCOTUS.

Changes to OPPS reimbursement must be implemented in a budget neutral manner



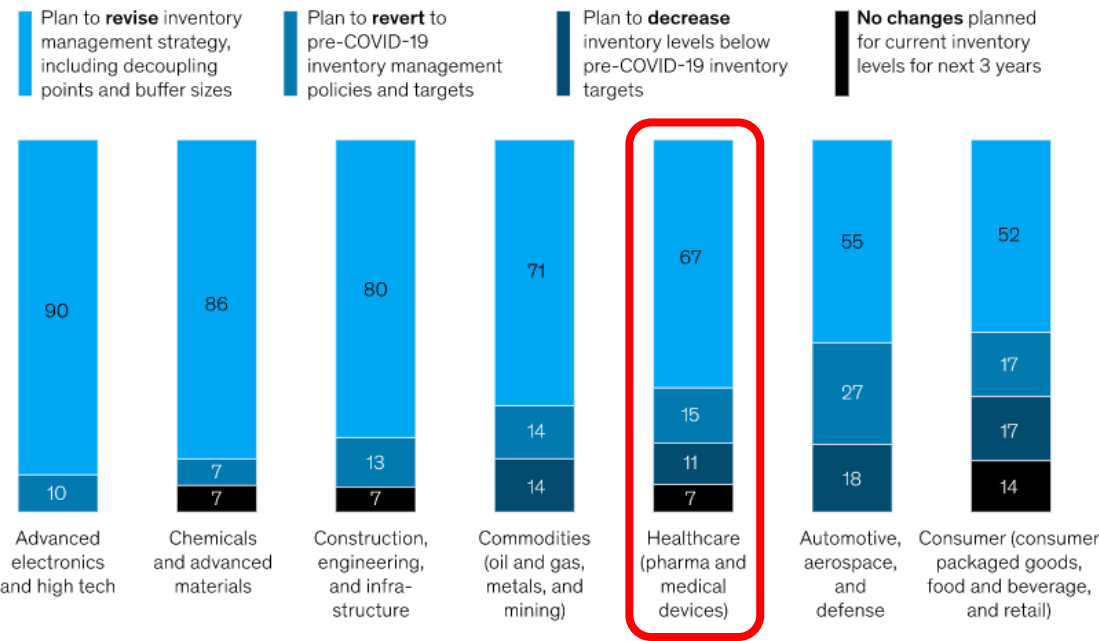
“Under the text and structure of the statute, this case is therefore straightforward: Because HHS did not conduct a survey of hospitals’ acquisition costs, HHS acted unlawfully by reducing the reimbursement rates for 340B hospitals.”

- Justice Brett Kavanaugh writing for the majority in the 9-0 decision favoring 340B hospitals.

Supply Chain...?

Most companies are planning significant changes to their inventory management strategies.

Inventory management evolution over the next 3 years,¹ % of respondents (n = 113)



¹Question: How do you envision your inventory management to evolve over the next 3 years?
Source: McKinsey survey of global supply chain leaders, Mar 28–Apr 19, 2022

McKinsey
& Company

09-12-22 | 9:00 AM

Why inflation is the next pandemic for supply chains

Although the consumer effects of inflation are easily understood, the complexities for those in the supply chain industry make it a difficult and far-reaching issue to navigate.

Supply chain partners need a single source of truth. Here's why.

Published Sept. 12, 2022



“To make things worse, each partner in the supply chain ecosystem is working in their own disparate systems of record, making it extremely difficult to align on data sets and pinpoint what exactly happens when a failure occurs on an order or a shipment. This leaves partners pointing fingers when it comes time to refute chargebacks, hold a quarterly business review, or accurately determine who is accountable for these failures.”

Health Spending

Overall inflation has not yet flowed through to the health sector

The Summer of Regulation

Physician Fee Schedule Proposed Rule

On July 7, the Centers for Medicare and Medicaid Services (CMS) released the Calendar Year 2023 Physician Fee Schedule proposed rule. Comments on the proposed rule were due September 6, 2022. Key proposals include:

A conversion factor of \$33.08 which is a \$1.53 decrease from CY 2022 (\$34.61) – or, -4.42%

INADEQUATE

Adding services to the telehealth list on a temporary basis (Category 3) and extend COVID-19 related telehealth flexibilities, including those related to geographic restrictions for 151 days after the end of the PHE

Delay until January 1, 2024 the previously finalized changes to the definition of “substantive portion” for purposes of split (or shared) E/M visits

RESCIND

Updating the Medicare Shared Savings Program to advance equity, increase participation and increase the number of beneficiaries assigned to ACOs

Ongoing development of new Merit-based Incentive Payment System Value Pathways (MVPs) and several requests for information on the future of the quality payment program

PERMANENCE/
REIMBURSEMENT

Calendar Year 2023 Outpatient Prospective Payment System Proposed Rule

On July 15, the Centers for Medicare and Medicaid Services (CMS) released the Calendar Year (CY) 2023 Outpatient Prospective Payment System proposed rule and comments were due September 13, 2022. Key proposals include:



Increases OPPS payment rates by 2.7% (3.1% market basket)

For 340B-acquired drugs, CMS anticipates finalizing a rate of ASP plus 6%



Payment policies and enrollment information for the new provider type, "Rural Emergency Hospitals"

Inpatient Prospective Payment System and OPPS adjustment for domestic NIOSH-approved surgical N95 respirators



Extension of COVID-19 related flexibilities (e.g., mental health services, virtual supervision)

Potential application of a suppression policy as related to the Overall Hospital Quality Star Ratings in 2023



Prior authorization for Facet Joint Injection and Nerve Destruction

It IS an Election Year...

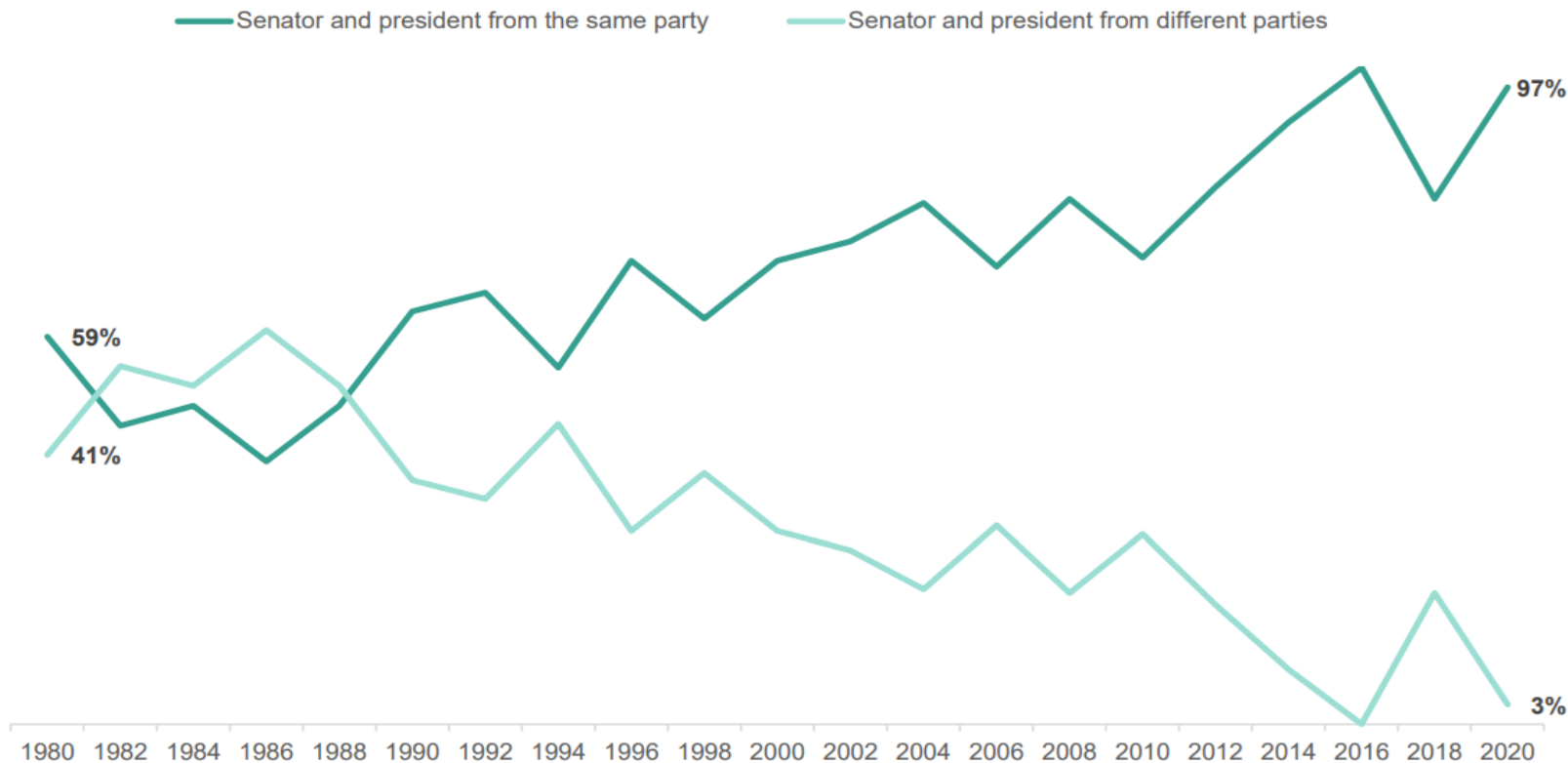
2022 Elections – At a Glance

- Democrat's control of House and Senate very much at risk in 2022 elections
- Off-year elections traditionally favor the party out of power
- Presidential popularity impacts outlook
- **38** House Democrats retiring or leaving for another office
- Redistricting likely to be a factor

Growing Partisanship

% of US Senate elections won by candidates of the same/different party as their state's most recent presidential election winner

DATA FROM THE CLERK OF THE US HOUSE OF REPRESENTATIVES, THE FEC, AND THE WASHINGTON POST



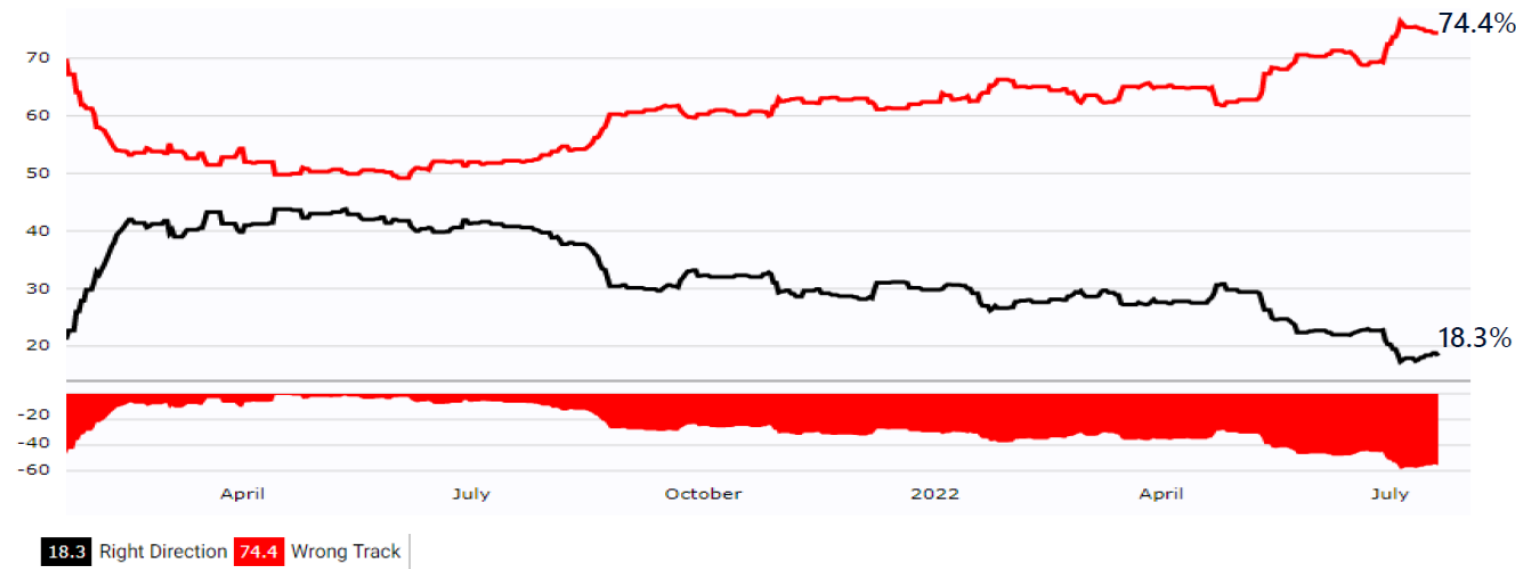
Approvals and Disapprovals

General Consensus

- On a non-partisan, general basis, **a large majority of Americans believe the country is heading in the wrong direction.**
- Trends only favor this number increasing.

Nearly 75% of Americans Think the Country is Headed in the Wrong Direction

Do you think the country is heading in the right or wrong direction?



Lay of the Land: House

House Will Likely Flip To GOP:

3x as many Democratic toss-up seats as Republicans in the House

Dems: 186				Toss-Up: 34	GOP: 215	
LIKELY D 13 Dem • 0 Rep 0 Ind	LEAN D 12 Dem • 3 Rep 0 Ind	D TOSS UP 26 Dem • 0 Rep 0 Ind		R TOSS UP 0 Dem • 8 Rep 0 Ind	LEAN R 7 Dem • 4 Rep 0 Ind	Likely R 3 Dem • 10 Rep 0 Ind
<ul style="list-style-type: none"> • CO-07 Open • CT-02 Courtney • GA-02 Bishop • IL-11 Foster • IL-14 Underwood • NC-06 Manning • NJ-03 Kim • NJ-05 Gottheimer • NM-03 Leger Fernandez • NY-04 Open • OR-04 Open • OR-06 New Seat • PA-12 Open 	<ul style="list-style-type: none"> • AZ-04 Stanton • CA-09 Harder • CA-47 Porter • CA-49 Levin • CT-05 Hayes • IL-06 Casten • IL-13 Open • MD-06 Trone • NC-01 Open • NY-17 Maloney • TX-34 Merged Seat 	<ul style="list-style-type: none"> • CA-13 Open • IL-17 Open • IN-01 Mrvan • KS-03 Davids • ME-02 Golden • MI-07 Slotkin • MI-08 Kildee • MN-02 Craig • NH-01 Pappas • NH-02 Kuster • NV-01 Titus • NV-03 Lee • NV-04 Horsford • NY-03 Open • NY-18 Open 	<ul style="list-style-type: none"> • NY-19 Vacant • OH-09 Kaptur • OH-13 Open • OR-05 Open • PA-08 Cartwright • PA-17 Open • RI-02 Open • TX-28 Cuellar • VA-02 Luria • VA-07 Spanberger • WA-08 Schrier 	<ul style="list-style-type: none"> • CA-22 Valadao • CA-27 Garcia • CO-08 New Seat • MI-03 Meijer • NC-13 Open • NM-02 Herrell • NY-22 Open • OH-01 Chabot 	<ul style="list-style-type: none"> • AZ-01 Schweikert • AZ-06 Open • CA-41 Calvert • CA-45 Steel • IA-03 Axne • MI-10 Open • NJ-07 Malinowski • NY-01 Open • PA-07 Wild • TX-15 Open • WI-03 Open 	<ul style="list-style-type: none"> • AZ-02 O'Halleran • CA-03 Open • CA-40 Kim • FL-07 Open • FL-13 Open • FL-15 New Seat • FL-27 Salazar • IA-01 Miller-Meeks • IA-02 Hinson • MN-01 Vacant • MT-01 New Seat • NE-02 Bacon • NY-02 Garbarino

Lay of the Land: Senate

Senate Too Close to Call: But Dems Feeling the Momentum...

Cook Political Report Race Ratings of 2022 Senate seats

Democrat-held seat

Republican-held seat

Independent-held seat

Incumbent not seeking reelection

*Asterisk indicates potential retirement



Midterm Election History

The last four presidents have lost Senate and House majorities; seven of those eight chambers were lost in midterm elections.

Across both party's recent presidencies, the opposite party has made significant gains in Congress during midterm elections.



**President
Bill Clinton (D)**

Republican gains in the
1994 midterms:

52 seats in the House
8 seats in the Senate



**President
George W. Bush (R)**

Democratic gains in the
2006 midterms:

30 seats in the House
6 seats in the Senate



**President
Barack Obama (D)**

Republican gains in the
2010 midterms:

63 seats in the House
6 seats in the Senate

Republican gains in the
2014 midterms:

13 seats in the House
9 seats in the Senate



**President
Donald Trump (R)**

Democratic gains in the
2018 midterms:

40 seats in the House
-2 seats in the Senate

Change Elections Are The New Normal

Change in Control of House, Senate and/or White House



What Happens After the Election?

Lame Duck Session:

- Post-election lame duck sessions may represent best opportunity for key legislation to be approved during election year
- Wildly unpredictable and dependent on election results
- Given the ambitious agenda in Congress, many banner policy items may slip until after election
 - Government funding depending on duration of CR
 - Pandemic preparedness
 - Making pandemic flexibilities permanent (telehealth, hospital-at-home, etc.)
 - Mental and behavioral health legislation
 - Healthcare extenders
 - Physician payment reform?



What Happens if The GOP Reclaims the Majority?

If Republicans claim House or Senate majority on election night – what could it mean for health care in the 118th Congress?

- Some potential options:
- Oversight
 - COVID-relief funding and response
 - Reversal of environmental focus
- GOP Healthy Futures Task Force recommendations
 - Reduce drug costs (H.R. 19, Out-of-Pocket caps, equalize patient cost-sharing regardless of setting)
 - Promote innovation, rapid approval and access to innovative products
 - Incentives for domestic manufacturing of drugs and therapeutics
 - Steps to curb fraud, waste and abuse
- Return to austerity?
- ACA reforms?
- 340B reforms?



Questions?

Contact: Shoshana Krilow

shoshana.krilow@vizientinc.com

Using the Power of Purchasing to Drive Health Equity and Economic Impact:

Panel and Roundtable Discussion

Meet Today's Panelists:



Simrit Sandhu

EVP, Strategic
Transformation &
Clinical Supply
Solutions

Vizient



Shaleta Dunn

AVP, Member
Diversity &
Community
Initiatives

Vizient



Charlene Vickers

Director of Supplier
Diversity and
Inclusion

Johnson & Johnson



Allison P. Corry

VP of Support
Services & Chief
Supply Chain Officer

Intermountain
Healthcare



Jorge F. Hernandez

VP Supply Chain
Services and Chief
Procurement Officer

Broward Health

Using the Power of Purchasing to Drive Health Equity and Economic Impact

Roundtable Discussion

Questions to Discuss with Peers

1. Where are you in your journey to implement an inclusive supplier diversity program? Is this a top five priority within your organization?
2. For those who have a program, describe the successful strategies for obtaining leadership and board buy-in.
3. Is there a way to track and measure your progress/spend? Please share how this is achieved.
4. What are your top areas for improvement within your supply chain and goals for 2023?

Medical Device Industry Trends



Travis Steed

US Equity Research, Medical
Supplies & Devices

Bank of America Securities

LISN Presentation

Medical Device Industry Trends

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Medtech History & Impact of COVID



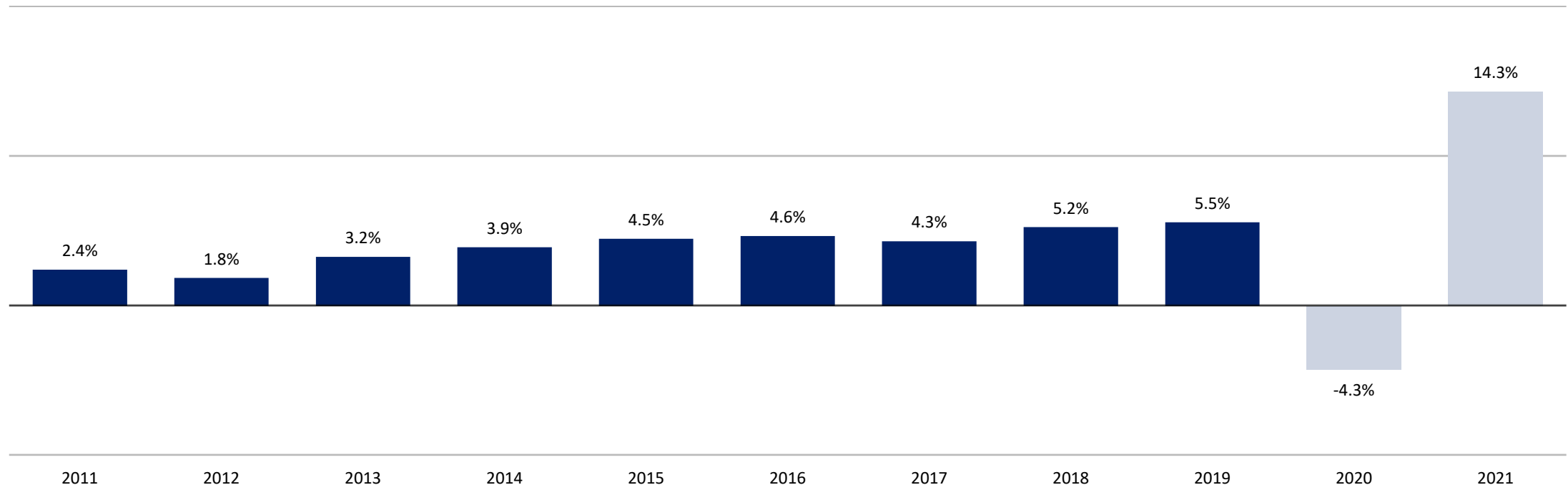


Medtech transformed over the last decade

Medtech stayed ahead of potential structural negatives and accelerated revenue growth from LSD to MSD

1. Increased investments in R&D to unlock new markers and unleashed accelerated revenue growth
2. Hired new CEOs
3. Large consolidation helped offset negative pricing pressure
4. Investments in emerging markets

Medtech Industry Organic Revenue Growth



Source: BofA Global Research, Bloomberg

Medtech names: Abbott, Alcon, Baxter, Becton Dickinson, Boston Scientific, Medtronic, Stryker, Teleflex, Zimmer Biomet, Johnson & Johnson Medical Devices



Until COVID /inflation disrupted nearly a decade of outperformance

...however, looking ahead we see another multi-year period of outperformance for medtech but there will be new winners

Medtech performance vs S&P 500

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD
Medtech	6.9%	16.9%	28.3%	28.8%	6.0%	12.4%	33.6%	14.9%	29.1%	9.3%	11.2%	(17.0%)
S&P 500	(0.0%)	13.4%	29.6%	11.4%	(0.7%)	9.5%	19.4%	(6.2%)	28.9%	16.3%	26.9%	(13.9%)
Medtech Outperformance/ Underperformance	6.9%	3.5%	-1.3%	17.4%	5.2%	2.9%	14.2%	8.7%	0.2%	-7.0%	-15.6%	-3.1%



Volumes in hospital continuing to trend back towards pre-COVID levels...

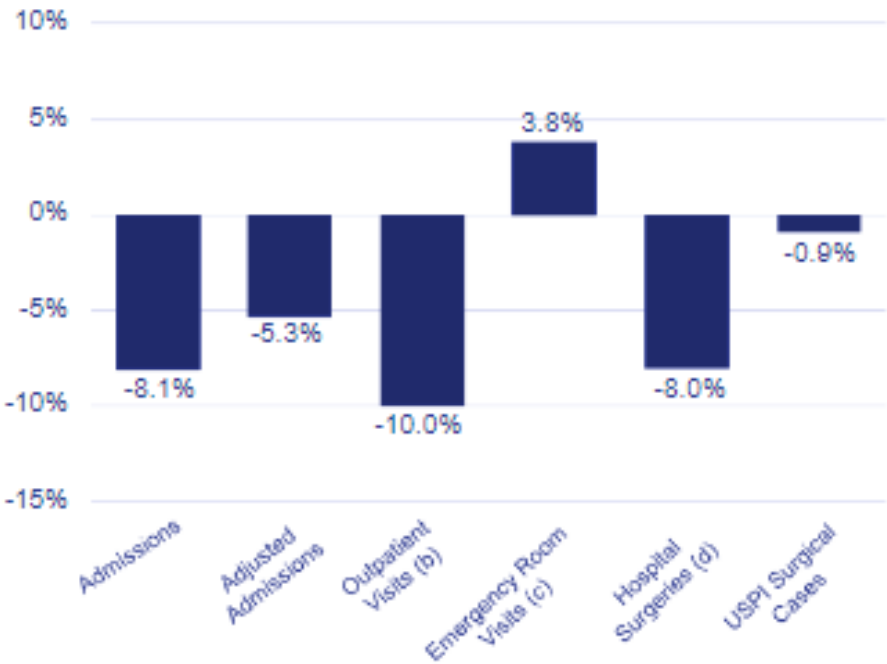
Tenet Healthcare volumes

Volume Statistics (a)

Recovery Percent of Pre-COVID Levels

	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22
Admissions	~90%	~91%	~87%	~81%	~83%
Outpatient Visits (b)	~96%	~93%	~90%	~85%	~86%
Emergency Room Visits (c)	~86%	~97%	~89%	~83%	~91%
Hospital Surgeries (d)	~97%	~91%	~89%	~88%	~89%
USPI Surgical Cases	~100%	~101%	~100%	~100%	~100%

Q2'22 versus Q2'21



Source: Tenet Healthcare



...And medtech revenues doing better...17% higher than 2019 (4% cagr)

Compared to pre-COVID levels, large cap medtech companies have increased sales by 5% on average

- Among the group, Intuitive Surgical and Edwards Lifesciences stand out the most as well as Abbott Laboratories albeit COVID testing revenue is a strong contributor

	2019 Sales	2022E Sales	CAGR (2019-2022E)
Abbott Laboratories	\$31,904	\$42,545	7%
Baxter	\$11,362	\$15,129	7%
Becton Dickinson*	\$17,354	\$19,102	2%
Boston Scientific	\$10,736	\$12,749	4%
Edwards Lifesciences	\$4,348	\$5,471	6%
Intuitive Surgical	\$4,479	\$6,230	9%
Medtronic*	\$31,062	\$31,091	0%
Stryker	\$14,884	\$18,306	5%
Teleflex	\$2,595	\$2,811	2%
Zimmer Biomet	\$7,982	\$6,863	-4%
Total	\$136,706	\$160,298	4%

Source: Company filings, Bloomberg

*Becton Dickinson and Medtronic on a cal basis



Major medtech markets have also grown 4% on average...but winners and losers...

Major medtech markets

- Led by strong growth in Afib, Diabetes, LAAC, TAVR, TMTT and Robotic Surgery

	2019	2021	CAGR (2019-2021)
Afib	\$5,592	\$6,636	6%
Neuromodulation			
SCS	\$612	\$564	-3%
DBS	\$76	\$77	1%
Diabetes			
CGM	\$4,205	\$7,120	19%
Pumps	\$2,574	\$3,158	7%
CRM			
High Power	\$4,569	\$4,510	0%
Low Power	\$3,062	\$3,301	3%
ICM	\$804	\$714	-4%
Ortho			
Hip	\$5,366	\$5,294	0%
Knee	\$7,148	\$6,698	-2%
Spine	\$7,902	\$8,020	0%
LAAC	\$541	\$882	18%
TAVR	\$4,350	\$5,141	6%
TMTT	\$717	\$933	9%
Robotic Surgery	\$4,479	\$5,710	8%
Total	\$51,996	\$58,758	4%

Medtech & Provider Related Issues: Labor





Medtech saying hospital staffing is stable to slightly better

What Large Cap Medtech is Saying on Staffing

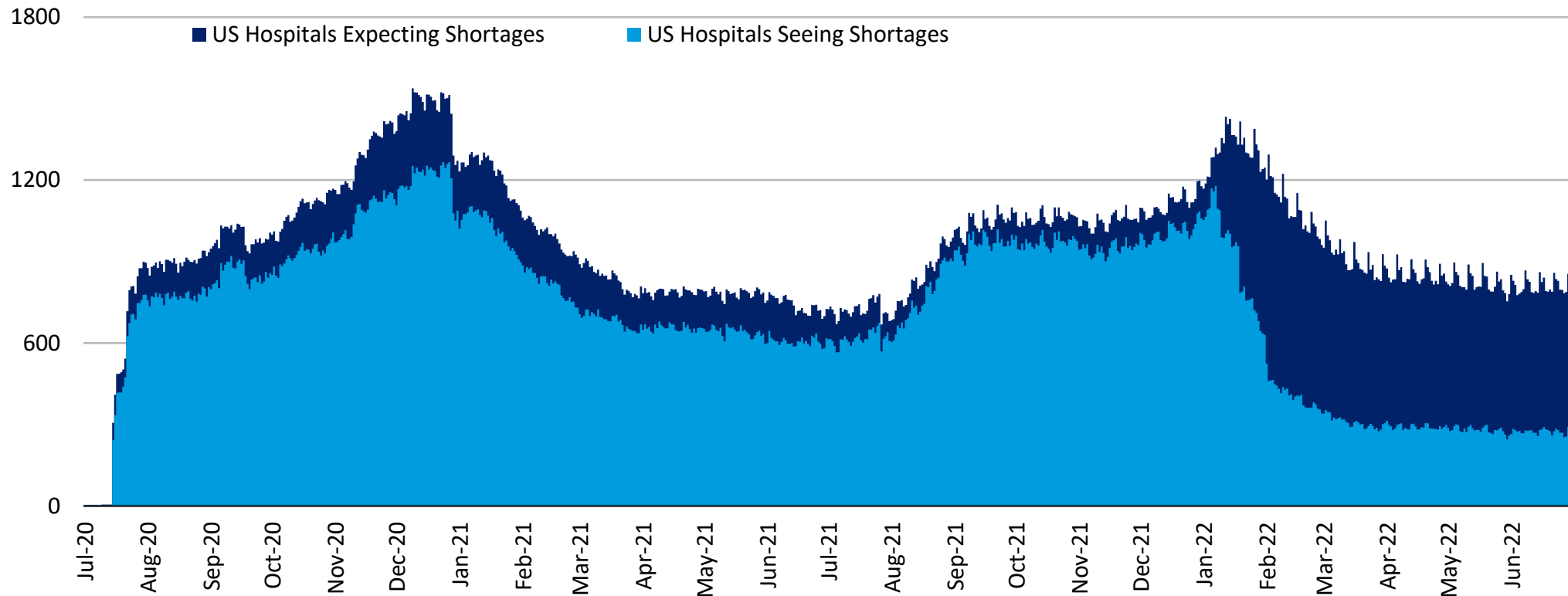
Company	Mgt Commentary
Medtronic, Sept 2022	“When we think about hospital staffing, that, I think, too, has stabilized a bit, if not gotten better. I think hospitals are better able to deal with the shortage challenges. We've seen a little bit less reliance on traveling nurses in certain systems, and I think that's helped. So hopefully, that has stabilized as well.”
Stryker, Sept 2022	“We're seeing good improvement in procedure volumes getting better. I think hospitals are getting better at sort of managing some of their new staffing realities and being more efficient about how they're running their ORs, sterile processing, everything that supports that.”



And you are seeing that in the data as well...HHS hospital survey

Labor shortages within healthcare have been exacerbated by the pandemic and many hospitals across the US are facing labor shortages

- This has impacted hospitals' ability to manage COVID patients (especially when COVID waves hit) and continue to perform elective surgery
- However, according to the most recent data from the Dept. of Health and Human Services (HHS), only 5% of hospitals seeing labor shortages as of 7/5 which has remained relatively stable

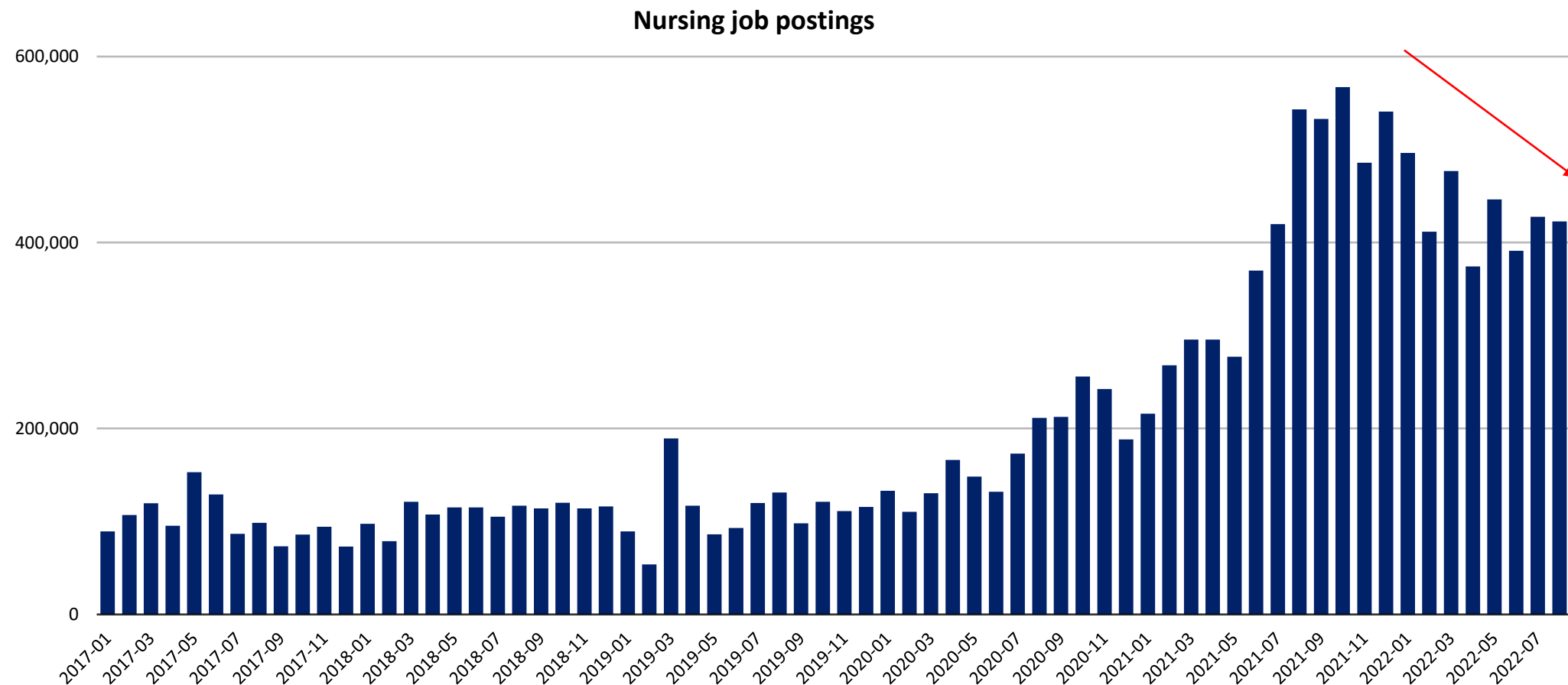




The number of nurse job postings going down as well

Nurse staffing still an issue that likely takes years to fully mitigate but some improvement is being seen...

- Demand for nurses has decreased roughly 22% Y/Y as of August 2022, and declined from the October peak



Source: RevelioLabs, BofA Global Research



QUESTION FOR AUDIENCE

Over the next 3 months how do you expect staffing shortages to trend in your hospital?

- A lot worse
- Slightly worse
- No change
- Slightly better
- A lot better

Medtech & Provider Related Issues: Inflation / Supply Chain





Inflation / Supply Chain Pressures on Medtech are real \$\$

Many companies are absorbing large impacts on the P&L from supply chain and other inflationary pressures

- **Abbott is facing \$900m** in incremental pressures... shipping (air vs freight); commodity costs (resins/plastic packaging)
- **Baxter is facing \$1bn in incremental pressures...** 1/3 labor that won't go away...other things are oil/gas/chips...
- **Boston Scientific is facing \$375m in incremental pressures...** direct materials, freight and labor costs as well as inefficiencies in manufacturing plants due to material availability
- **Stryker is facing \$300-350m of pressure on gross margin...** Commodity-oriented for metals, for plastics, transportation and labor, spot buys and electronics



But inflation / supply chain for medtech seems stable to easing

Medtech companies are starting to see some stabilization

Company	Mgt Commentary
Stryker, Sept 2022	“Cost side of things, I do think that things are less worse. So we're not having to go to the spot market as much to buy chips. We are starting to have regular interactions with our normal vendors at our normal contracted prices, which is good. We are feeling some of the effects of just the underlying inflation of labor, transportation, distribution, commodities, plastics, resins, metals.”
Becton Dickenson, Sept 2022	“Think we certainly see some stabilization. We certainly don't see continued escalating inflation, and we see some pockets in areas like shipping, obviously, in oil, transportation, oil-related costs starting to head down a bit. Labor inflation, we don't certainly see that changing, really not reversing at all... Chips may be getting better in certain areas, maybe resin is getting better.”
Baxter, Sept 2022	“Things like resin prices, other raw material prices, things like the requirement to make spot purchases, the rate -- freight rates that we were seeing elevated. And what I would say, generally speaking, is we are seeing sort of stable to improving levels in many of these areas. ”

Pricing

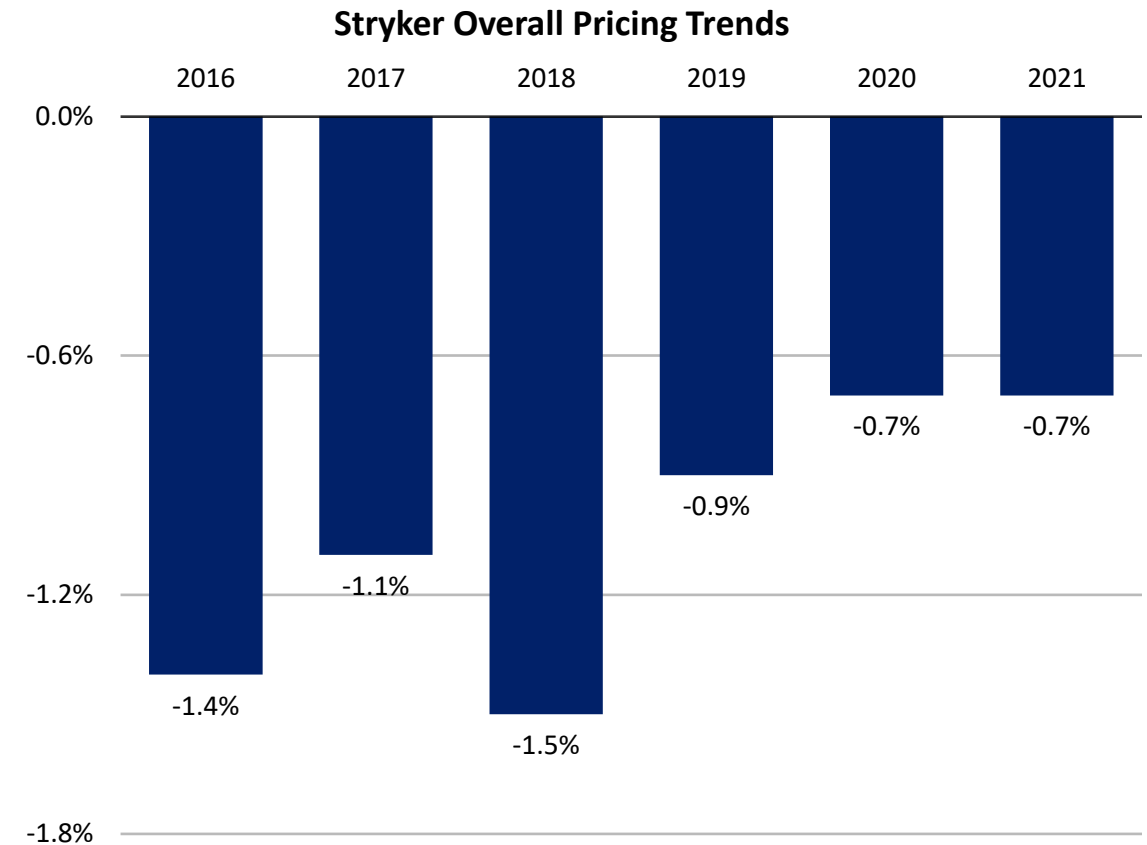
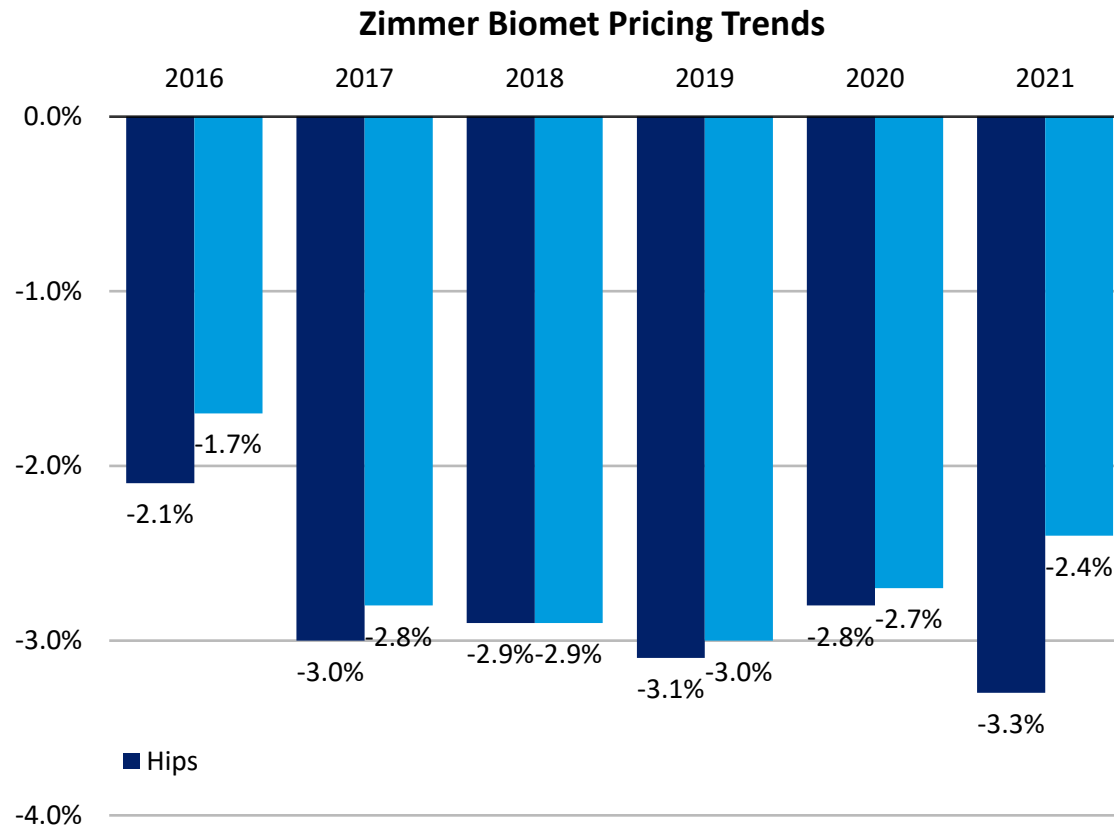




Pricing historically for medtech has been down low single digits every year

Medtech generally does not have pricing power to offset increased costs

- However, according to our survey hospitals seem more open to price increases





What Management Teams are Saying

Pricing

Company	Mgt Commentary
Baxter, July 2022	“Right now are preparing the implementation of a second wave of actions in response to the significant price increases that we have received from our suppliers and our cost increase in terms of the labor cost and other internal cost, fuel costs and energy costs and everything.”
Becton Dickenson, Aug 2022	“we put an inflation task force in well over a year ago, recognizing what we saw was going to be inflation this year and what we expect to continue to be inflation in 2023. Where we can't offset internally, we do pass on pricing. We do expect to continue to drive very large significant actions within BD to offset inflation as we look ahead, but we'll continue also where we can't fully offset that to continue to pass that through in price.”
Stryker, Sept 2022	“We're all getting smart on price. Typically on the Ortho side of the business, we see anywhere from negative 5% for spine to minus 2% for hips and knees. And so, there's where an opportunity is to engage our customers and really start to work on price on the Ortho side. And a win could even look like holding price flat on the Ortho side. But it is conversations that we are having with customers now.



QUESTION FOR AUDIENCE

How would you characterize the price increases you've experience with Becton Dickinson over the past year?

- None
- Very mild
- Mild
- Moderate
- Severe



QUESTION FOR AUDIENCE

How successful will Baxter be with its second wave?...what kind of pricing increases do you think Baxter will be able to push through in their second wave?

- None
- Very mild
- Mild
- Moderate
- Severe

Medtech op margins in line to slightly below 2019 levels



	Gross Margin												Y/Y Acceleration / Deceleration						
	2019	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22A	3Q22E	4Q22E	2022E	1Q22	2Q22A	3Q22E	4Q22E	2022E	2023E	
Abbott Laboratories	59.2%	57.6%	58.3%	56.9%	58.8%	57.7%	58.0%	59.1%	56.7%	55.8%	56.2%	57.0%	83bps	-25bps	-305bps	-150bps	-92bps	57.4%	40bps
Baxter	44.9%	42.4%	42.0%	42.6%	44.0%	44.3%	43.3%	45.0%	42.5%	42.5%	43.5%	43.4%	303bps	-14bps	-154bps	-80bps	5bps	43.2%	-14bps
Boston Scientific	72.4%	67.1%	68.9%	70.5%	70.6%	70.9%	70.3%	70.3%	70.4%	70.6%	71.0%	70.6%	135bps	-10bps	1bps	18bps	29bps	70.9%	37bps
Medtronic*	69.5%	64.3%	68.2%	68.8%	68.8%	68.9%	68.7%	68.5%	66.5%	66.5%	66.5%	67.0%	32bps	-228bps	-235bps	-242bps	-169bps	67.1%	12bps
Stryker	65.9%	63.8%	65.4%	66.0%	66.3%	65.8%	65.9%	64.1%	63.3%	63.4%	64.7%	63.9%	-133bps	-267bps	-284bps	-110bps	-200bps	64.4%	55bps
Teleflex	58.1%	56.7%	59.4%	59.9%	59.5%	58.8%	59.4%	58.3%	59.6%	58.7%	59.9%	59.3%	-111bps	-28bps	-78bps	114bps	-12bps	59.6%	34bps
Zimmer Biomet	73.0%	71.1%	72.4%	72.3%	71.2%	69.7%	71.4%	70.6%	71.6%	70.5%	70.8%	70.8%	-179bps	-69bps	-65bps	108bps	-61bps	70.8%	0bps
Average	63.3%	60.4%	62.1%	62.4%	62.8%	62.3%	62.4%	62.3%	61.5%	61.2%	61.8%	61.7%	18bps	-92bps	-160bps	-49bps	-71bps	61.9%	23bps
Edwards Lifesciences	76.2%	75.5%	76.0%	75.9%	76.3%	76.8%	76.3%	77.8%	80.5%	80.1%	80.4%	79.7%	184bps	453bps	377bps	351bps	340bps	77.4%	-230bps
Intuitive Surgical	71.7%	68.4%	71.8%	71.7%	71.3%	70.1%	71.2%	69.8%	69.2%	69.2%	69.3%	69.4%	-205bps	-252bps	-202bps	-83bps	-182bps	69.9%	53bps
Average	65.6%	63.0%	64.7%	65.0%	65.2%	64.8%	64.9%	64.8%	64.5%	64.2%	64.7%	64.5%	12bps	-49bps	-105bps	-8bps	-38bps	64.5%	-1bps

	Operating Margin												Y/Y Acceleration / Deceleration							
	2019	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22A	3Q22E	4Q22E	2022E	1Q22	2Q22A	3Q22E	4Q22E	2022E	2023E		
Abbott Laboratories	22.3%	23.1%	27.2%	24.9%	27.8%	25.2%	26.3%	30.4%	26.5%	20.1%	20.5%	24.8%	327bps	159bps	-778bps	-475bps	-152bps	23.9%	-88bps	
Baxter	18.7%	18.0%	17.0%	17.2%	20.2%	20.3%	18.8%	18.0%	16.2%	16.8%	18.4%	17.1%	96bps	-105bps	-339bps	-190bps	-167bps	18.3%	120bps	
Boston Scientific	26.1%	19.3%	24.3%	25.1%	25.6%	26.2%	25.3%	25.8%	25.2%	26.2%	27.1%	26.1%	150bps	9bps	59bps	90bps	76bps	26.7%	59bps	
Medtronic*	29.5%	20.4%	28.5%	28.3%	27.0%	28.1%	28.0%	29.7%	23.9%	25.9%	27.4%	26.7%	120bps	-432bps	-111bps	-74bps	-124bps	27.5%	83bps	
Stryker	26.3%	24.4%	23.5%	25.9%	25.4%	27.3%	25.6%	21.8%	23.7%	24.1%	27.3%	24.4%	-162bps	-222bps	-130bps	-1bps	-125bps	25.2%	81bps	
Teleflex	25.8%	24.9%	27.5%	28.2%	28.5%	27.6%	28.0%	25.7%	27.5%	26.2%	28.2%	27.0%	-173bps	-76bps	-225bps	62bps	-97bps	27.8%	79bps	
Zimmer Biomet	29.6%	25.0%	27.3%	24.1%	28.3%	28.1%	26.9%	26.4%	28.0%	26.7%	28.1%	27.3%	-86bps	391bps	-167bps	4bps	41bps	27.5%	22bps	
Average	25.5%	22.2%	25.0%	24.8%	26.1%	26.1%	25.5%	25.4%	24.4%	23.7%	25.3%	24.8%	39bps	-39bps	-241bps	-83bps	-78bps	25.3%	51bps	
Edwards Lifesciences	30.3%	30.1%	31.8%	32.4%	30.4%	27.4%	30.5%	33.2%	32.5%	33.9%	34.1%	33.3%	139bps	10bps	350bps	661bps	287bps	32.1%	-125bps	
Intuitive Surgical	39.9%	34.8%	40.8%	43.0%	40.6%	37.9%	40.5%	35.8%	34.9%	34.0%	33.7%	34.6%	-497bps	-813bps	-667bps	-416bps	-590bps	35.5%	85bps	
Average	27.6%	24.4%	27.5%	27.7%	28.2%	27.6%	27.8%	27.4%	26.5%	26.0%	27.2%	26.8%	-10bps	-120bps	-223bps	-38bps	-95bps	27.2%	35bps	

Capex Outlook

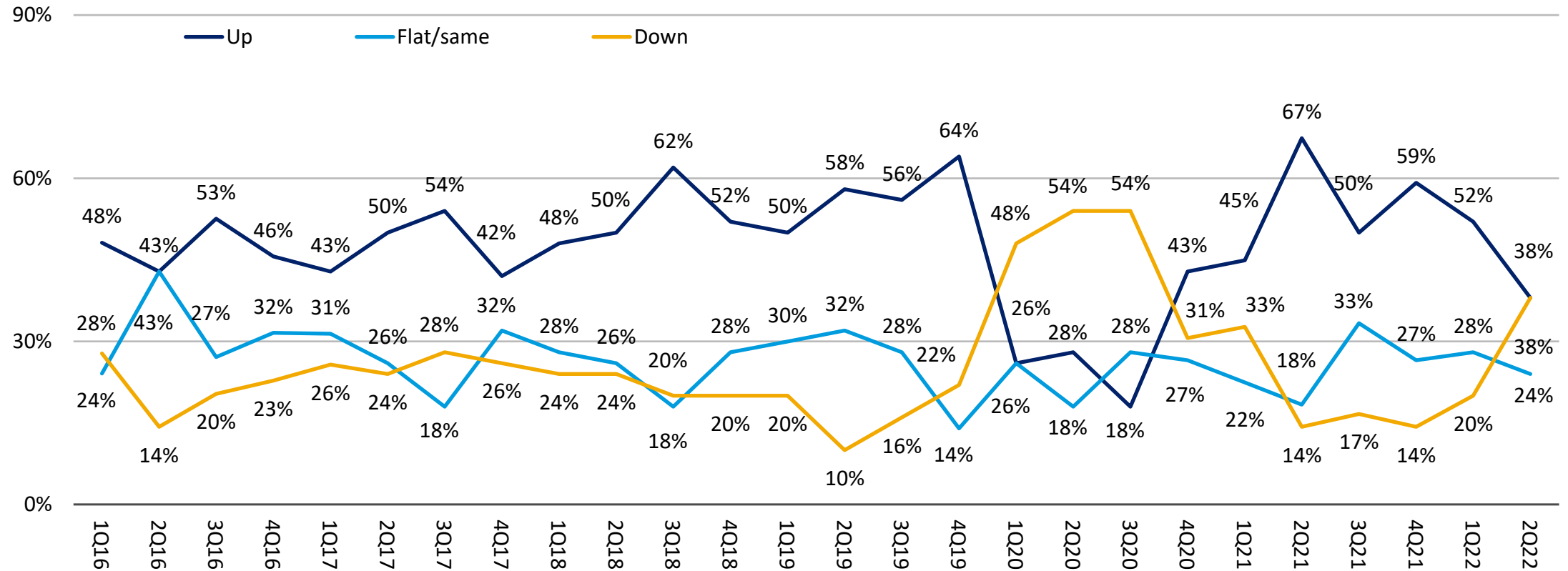




Hospital Survey – Capex

Question: How would you describe your hospital/hospital system's plans for capital spending in 2022 relative to 2021?

38% of respondents expect capital spending to increase which is a significant step down from 52% in 1Q22





What Management Teams are Saying...two views...Intuitive vs Stryker

What CEO'S are saying about capex...

Company	Mgt Commentary
Intuitive Surgical, Sept 2022	“It's a challenging period...it's apparent to us that hospitals, many hospitals are facing real financial pressure for all the factors described. And a subset of them are being very careful with respect to preserving cash and managing their capital budgets.”
Stryker, Sept 2022	<p>“Hospitals during the pandemic already sort of slowdown or deferred some capital purchases. And so as you look at operating capital, that's going to hit a wall. Sooner or later, you've got to replace power drills and cameras. They wear out. You sterilize them. You're going to have to replace those things. And so I just think that those cycles have already elongated. And so, we're seeing hospitals want to repurchase those.</p> <p>The other thing I will say on large capital is that, typically, those larger capital purchases are tied to hospital strategic plans. And so hospitals are anxious to sort of execute on these key strategies, whether it's standardizing my beds, updating my ORs for efficiency to better compete against ASCs. And so I think they're prioritizing some of those things.</p>



QUESTION FOR AUDIENCE

How do you expect next year's (2023) capital spending budgets to compare to this year's (2022)?

- Down significantly (-10%+ change)
- Down slightly (-5% change)
- Flatish (+/- 2-3%)
- Up slightly (+5% change)
- Up significantly (-10%+ change)

Medtech Markets and More





Innovation in medtech is still a major driver of growth

4 Large Growth Markets Today

- **Afib:** \$6bn market growing 10-15%
- **Robotics:** >\$5bn market growing 15-15%
- **TAVR:** \$5bn market growing low double digits
- **Diabetes (CGM):** \$5.5bn market growing 25%+
- **Diabetes (Pumps):** \$3bn market growing 10%+

Major Market Players

- **Afib:** Abbott, AtriCure, Boston Scientific, Johnson & Johnson, Medtronic
- **Robotics:** Intuitive Surgical, Medtronic
- **TAVR:** Abbott, Boston Scientific, Edwards, Medtronic
- **Diabetes (CGM):** Abbott, Dexcom
- **Diabetes (Pumps):** Medtronic, Insulet, Tandem



New and Expanding Markets

- **LAAC:** \$1bn today, growing to \$2bn by 2024
- **Mitral & Tricuspid:** \$1bn today, \$5bn market by 2028
- **Implantable Cardiac Monitor:** \$750m today, growing to \$2bn by 2030
- **HF Monitoring:** \$110m today, TAM of \$10bn
- **Sacral Neuromodulation for OAB:** \$700m today, growing mid-teens
- **Painful Diabetic Neuropathy:** \$70m today, growing to \$300m by 2026
- **Renal Denervation:** \$500m market by 2026 growing to \$2-3bn by 2030
- **Sleep Apnea:** \$11bn+ TAM
- **Venous and Arterial Clot Management:** \$5.8bn VTE TAM and \$600m Arterial TAM

Major Market Players

- **LAAC:** Abbott, Boston Scientific
- **Mitral & Tricuspid:** Abbott, Edwards, Medtronic
- **Implantable Cardiac Monitor:** Abbott, Boston Scientific, Medtronic
- **HF Monitoring:** Abbott
- **Sacral neuromodulation:** Axonics, Medtronic
- **Painful Diabetic Neuropathy:** Nevro, Medtronic
- **Renal Denervation:** Medtronic
- **Sleep Apnea:** Inspire Medical, LivaNova
- **Venous / Arterial Clot Management:** Inari Medical, Penumbra



Is the TAVR market slowing? Or just COVID/staffing issues?

The TAVR market has grown to be >\$5bn, and is expected to continue to grow low double digits through 2028

	2016A	2017A	2018A	2019A	2020A	1Q21A	2Q21A	3Q21A	4Q21A	2021A	1Q22A	2Q22A
US TAVR Market												
Edwards (excluding royalty)	940	1,200	1,378	1,728	1,789	479	548	536	515	2,078	526	548
Medtronic	394	534	620	717	552	171	193	177	185	726	186	172
Boston Scientific	7	1	0	49	56	0	0	0	0	0	0	0
Abbott Laboratories	0	0	0	0	0	0	0	0	0	0	2	3
Total US Revenue	1,341	1,735	1,998	2,494	2,397	650	741	713	700	2,803	714	723
Total US Market Growth	-	29.4%	15.2%	24.8%	-3.9%	10.6%	46.3%	7.8%	9.0%	17.0%	10.0%	-2.4%
US Market Share												
Edwards (excluding royalty)	70.1%	69.2%	69.0%	69.3%	74.6%	73.7%	74.0%	75.2%	73.6%	74.1%	73.7%	75.8%
Medtronic	29.4%	30.8%	31.0%	28.8%	23.0%	26.3%	26.0%	24.8%	26.4%	25.9%	26.0%	23.8%
Boston Scientific	0.5%	0.1%	0.0%	2.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Abbott Laboratories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%



Source: Company filings, BofA Global Research

Pascal Precision (TMTT) just FDA approved last week

Edwards presented data Saturday on Pascal...non inferior to Abbott's Mitraclip in degenerative MR

Edwards presented data on Pascal Precision for Degenerative MR this past weekend at TCT



- Approval in functional MR could come in 2024/2025
- **Abbott's MitraClip average selling price is around \$25k and Edwards Pascal Precision is expected to be priced around a 10% premium**

	2016A	2017A	2018A	2019A	2020A	1Q21A	2Q21A	3Q21A	4Q21A	2021A	1Q22A	2Q22A
US Revenue (\$m)												
Edwards	-	-	-	-	-	-	-	-	-	-	-	-
Abbott (MitraClip)	156	198	247	365	330	97	116	103	107	423	101	110
Abbott (Tendyne)	-	-	-	-	-	-	-	-	-	-	-	-
Abbott (TriClip)	-	-	-	1	8	-	1	1	-	2	-	-
Total US Revenue	156	198	247	366	338	97	117	104	107	425	101	110
<i>y/y reported growth</i>												
Abbott		26.9%	24.8%	48.1%	-7.5%	16.2%	116.7%	1.0%	9.2%	25.6%	4.1%	-6.0%
Total US Market		26.9%	24.8%	48.1%	-7.5%	16.2%	116.7%	1.0%	9.2%	25.6%	4.1%	-6.0%
US Market Share												
Edwards	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Abbott (MitraClip)	100.0%	100.0%	100.0%	99.7%	97.6%	100.0%	99.1%	99.0%	100.0%	99.5%	100.0%	100.0%
Abbott (Tendyne)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Abbott (TriClip)	0.0%	0.0%	0.0%	0.3%	2.4%	0.0%	0.9%	1.0%	0.0%	0.5%	0.0%	0.0%

Left Atrial Appendage Closure (LAAC)...Abbott now has about 8% share...can they get to 50% share?



LAAC is one of the fastest growing markets in medtech driven by an increasing prevalence

- Abbott received FDA approval of Amulet in August 2021, making the market a two player game

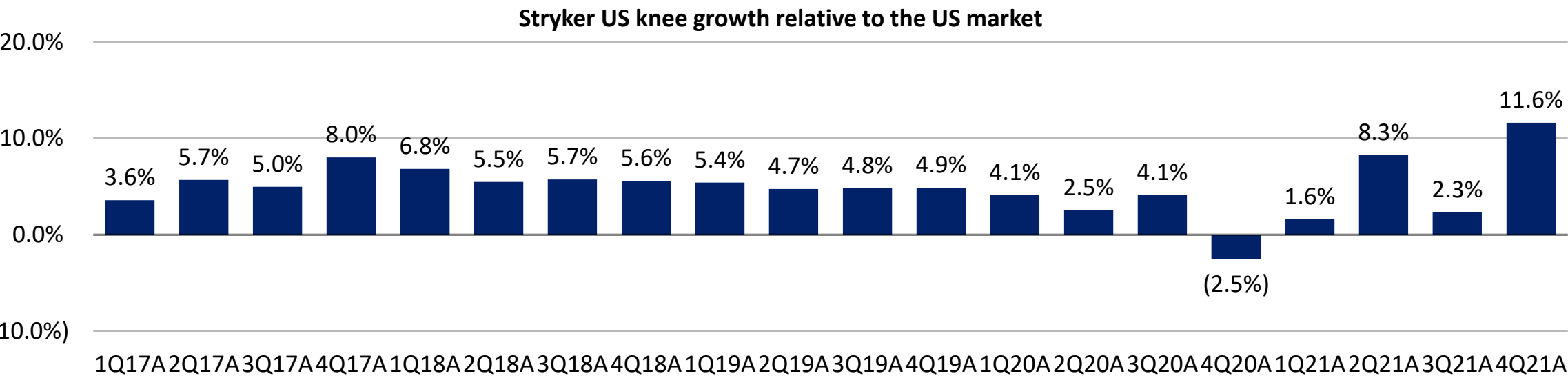
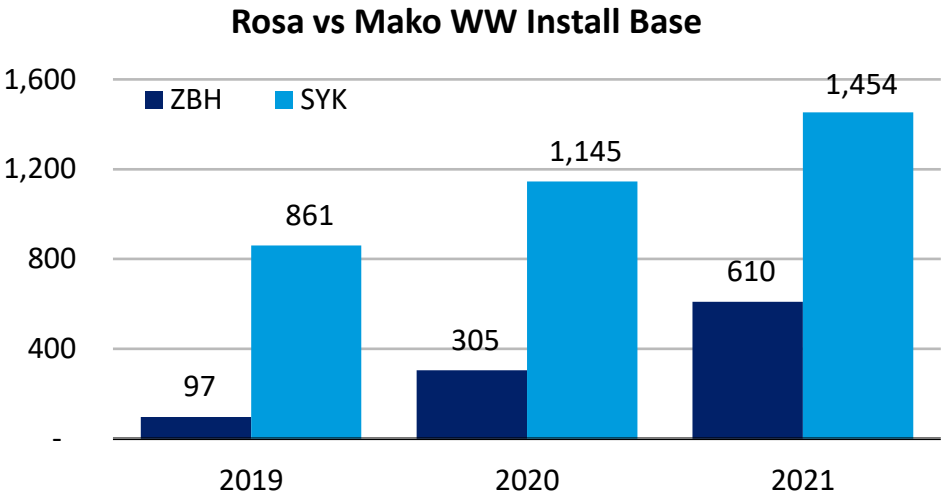
	2016A	2017A	2018A	2019A	2020A	1Q21A	2Q21A	3Q21A	4Q21A	2021A	1Q22A	2Q22A
US LAAC Market												
Boston Scientific (Watchman)	129	213	313	426	434	149	192	188	204	733	203	225
Abbott Laboratories (Amulet)	0	0	0	0	0	0	0	2	9	11	16	19
Total US Revenue	129	213	313	426	434	149	192	190	213	744	219	244
<i>y/y reported growth</i>												
Boston Scientific (Watchman)	0%	64%	47%	36%	2%	39%	201%	53%	46%	69%	37%	17%
Abbott Laboratories (Amulet)	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total US Market	0%	64%	47%	36%	2%	39%	201%	55%	52%	71%	47%	27%
US Market Share												
Boston Scientific (Watchman)	100%	100%	100%	100%	100%	100%	100%	99%	96%	99%	93%	92%
Abbott Laboratories (Amulet)	0%	0%	0%	0%	0%	0%	0%	1%	4%	1%	7%	8%



Ortho – Robots...Stryker still leading the way...

Mako install base is 2.5x larger Rosa

- Stryker’s Mako install base is still 2.5x larger than Zimmer’s Rosa. Johnson & Johnson launched its Velys robot in 2021 but does not disclose the installed base
- Stryker Knee growth has continued to outpace the knee market
- **More than 50% of SYK’s total knees were implanted using Mako in Q421**



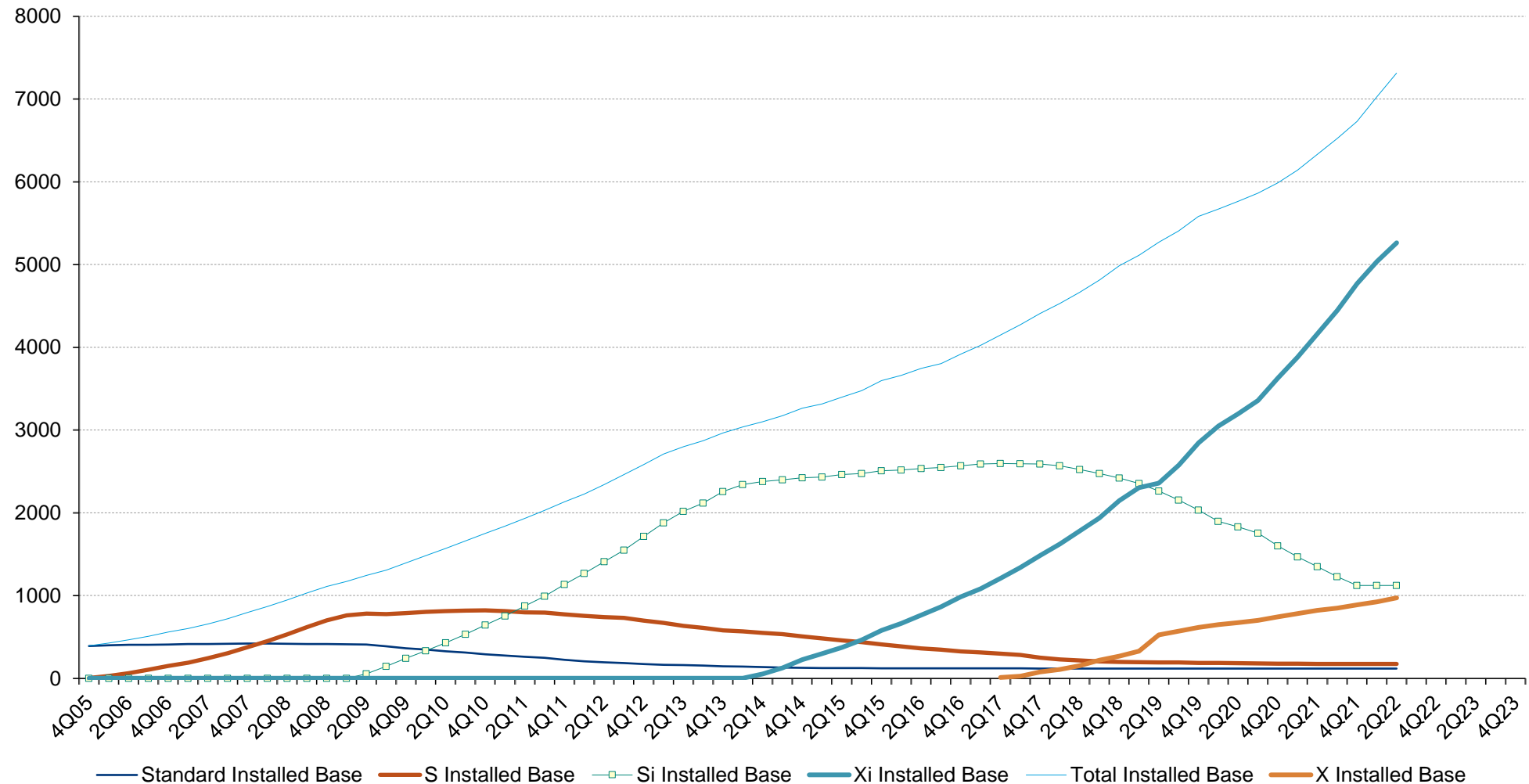
Source: Company filings, BofA Global Research



Intuitive installed base now over 7k systems WW and over 4k in the US

Intuitive install base continues to grow, with Xi now driving most of the growth

- However, will they launch a new system or what's next?



Source: Company filings, BofA Global Research



50+ companies working on soft tissue robotics... but its hard work

Robotic surgery market has grown >\$5bn pioneered by Intuitive Surgical

- Competition is on the horizon... or is it?

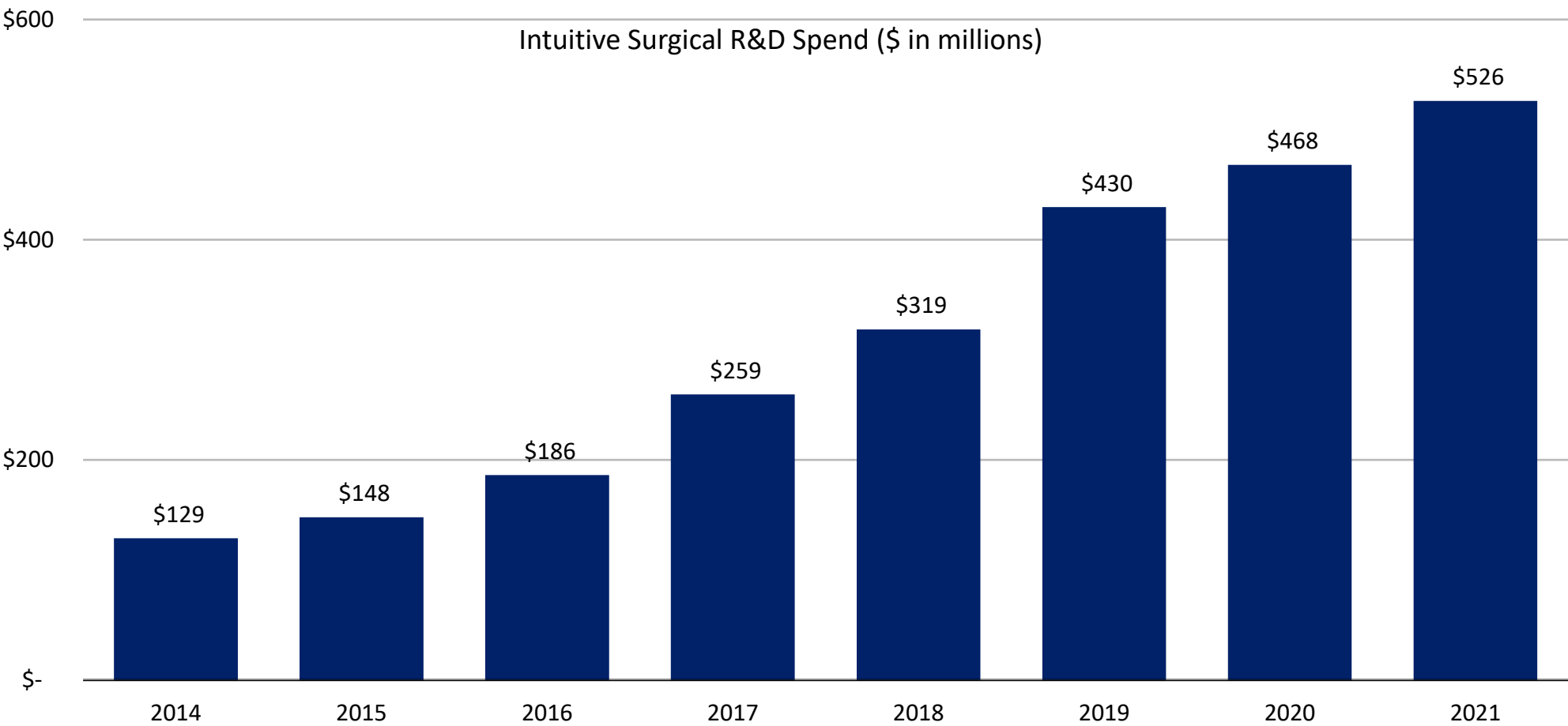
Company	System Name	Description	US Status	International approval	Comments
Medtronic	Hugo	Multi-port robot with individual modules	Not approved (starting IDE trial soon for urology)	CE mark (urology and gynecology)	US IDE trial (Expand Uro) about to start
JNJ	Ottava	Mutli-port robot system; table based with six arms	Not approved	Not approved	Announced a 2-yr delay to program; First-in-man now expected 2H 2024
Vicarious Surgical		Single port system with two arms and a camera	Not approved (Plan to submit for 510(k) ventral hernia in 2H 2023)	Not approved	Not expected to be on the US market until 1H 2024 based on expected 510(k)
Memic Innovative Surgery	Hominis 6N	Transvaginal two arm robot	Approved (De Novo in Feb 2021)	CE Mark pending	Installed first systems in early 2022; expect CE mark and EU commercialization in 2022
Memic Innovative Surgery	Hominis Block II	Second generation single port robot with three arms and a camera	Not approved (No timeline provided)	Not approved	Next generation still in development
CMR Surgical	Versius	Multi-port robot with modular arms	Not approved	CE Mark (March 2019)	Focused on Europe and international markets
Asensus	Senhance	Multi-port laparoscopic robot	Approved (510(k) clearance for 31 laparoscopic procedures)	CE Mark (adult and pediatric lap abdominal and pelvic surgery)	Robot-assisted laparoscopic



Hard to keep up with Intuitive spending over \$500m a year in R&D and growing

Intuitive Surgical R&D Spend

Intuitive Surgical has spent almost \$2.5bn in R&D since 2014



Source: Company filings, BofA Global Research



When is a new Intuitive robot coming??

Intuitive Surgical is buying stock... and in the past the company has done this around new product launches

- “Looking at the regulatory environment ...we have seen a trend in medical device and in **robotic-assisted surgery for increasing data requirements, sometimes those are trials, sometimes there are other kind of data.**
- **You can expect that we will improve the Gen 4 product that's out there.** We can get good ideas and technologies into our existing customer base hands and improve their utility, we will do that. We are, of course, working on next generations, and as I've said before, generations after that.
- **The deeper the technologic opportunities and the clinical impact, the more likely you have deeper validation work to do.** And we're not afraid of that work. I'd rather do things that are really clinically meaningful for the customer, and if we have to do the work, then we'll do the work.
- **I think, and this is a prediction that it will also extend the useful life of products that we design.** So it's taking a little longer to get to market than it used to. Maybe more than a little. It's costing us more to get there, but that change in environment also means that really well-designed systems probably have longer useful lives.”



Symplcity Spyral (Renal Denervation)

Medtronic's ON-MED pivotal data is expected to be presented at AHA in November

This is the last step before MDT submits for FDA approval, which would put US approval for some time in 2023

- Subsequent to this most recent delay, Medtronic pushed its market size expectations of RDN to \$500m in 2026 and \$2-3bn in 2030, down from previously \$1bn in 2026 and \$3bn in 2030
- We see TAM of \$68bn+ in the US**, which could ultimately grow to be much larger driven by an increasing prevalence of hypertension and expanding awareness
- Average selling price \$14-15k**

	24-hour Ambulatory						Office					
	Systolic BP			Diastolic BP			Systolic BP			Diastolic BP		
	RDN	Sham	Difference	RDN	Sham	Difference	RDN	Sham	Difference	RDN	Sham	Difference
OFF MED Pivotal Trial (3 months)	-4.7	-0.6	-4.0	-3.7	-0.8	-3.1	-9.2	-2.5	-6.6	-5.1	-1.0	-4.4
OFF MED Pilot Study (3 months)	-5.5	-0.5	-5.0	-4.8	-0.4	-4.4	-10.0	-2.3	-7.7	-5.3	-0.3	-4.9
ON MED Pilot Study (6 months)	-9.0	-1.6	-7.4	-6.0	-1.9	-4.1	-9.4	-2.6	-6.8	-5.2	-1.7	-3.5
ON MED Pilot (3-years)	-18.7	-8.6	-10.0	-11.9	-6.0	-5.9	-20.9	-12.5	-8.2	-10.4	-7.2	-3.9
ON MED Pivotal Trial (6 months)	??											





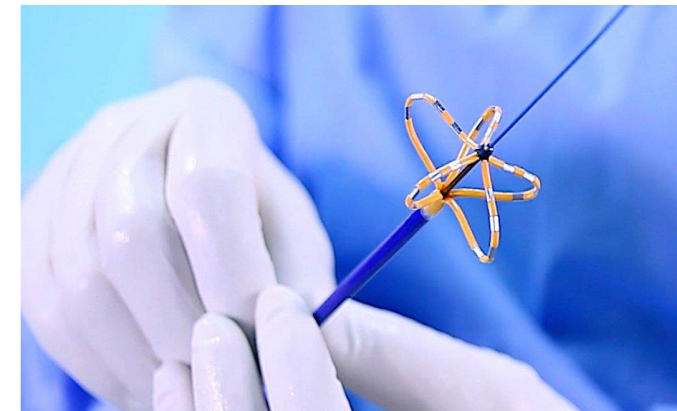
Farapulse (Pulsed Field Ablation) could come to the US market in 2023?

May offer safety and efficacy advantages given nonthermal energy source

Boston Scientific and other major players are running trials to bring PFA to the US

- **Farapulse received CE Mark in Q121 and Boston Scientific plans to move into a full launch in the EU in 2H22.**
The company also initiated a US IDE trial (ADVENT) in March 2021 and recently completed trial enrollment
- The trial is designed to examine the safety and effectiveness comparing the Farapulse PFA system with standard of care ablation with RF and cryoballoon catheters indicated for the treatment of paroxysmal Afib. ADVENT has a one-year follow up, which puts a **potential US approval in 2023**

Company	Device	FDA Approval	CE Mark
Boston Scientific	Farapulse	Approval by 2023 Year End	2021; Full Market Release in 2H22
Medtronic	PulseSelect	2023?	2023?
Affera	HexaPulse	2023?	2023?
Johnson & Johnson	VARIPULSE	Need separate trial for US	Ongoing study
Acutus	AcQBlate (PFA)	Start trial in 2022/2023	Ongoing study
Adagio	iCLAS	Plans to initiate an EFS study	Plans to initiate a trial to support CE Mark
Kardium	Globe PF System	Start working on IDE trial in 2022	-





FDA cracking down on infusion pump market

Baxter launching long awaited Novum IQ Syringe pump but LVP still under review

- Large Volume Pump 510(k) package submitted, FDA response received in April and expect to respond to the FDA by year end.
- Novum IQ Syringe Infusion Pump FDA 510(k) approval in August 2022.
- Baxter also planning Ambulatory & PCA as well



Becton Dickinson timing on Alaris remains uncertain

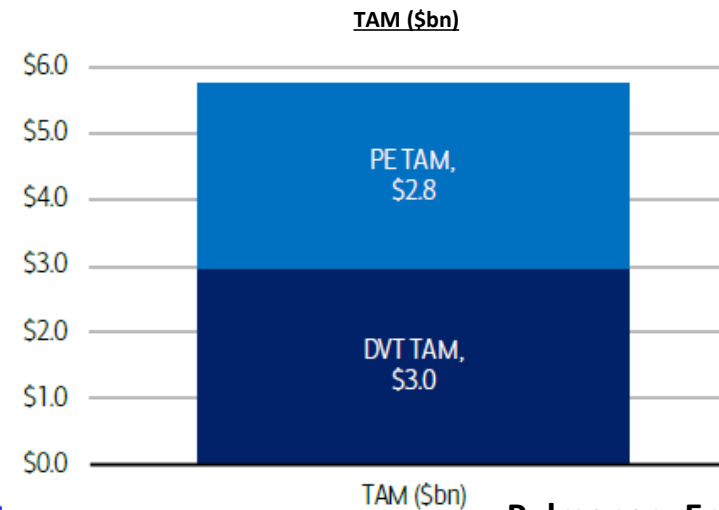
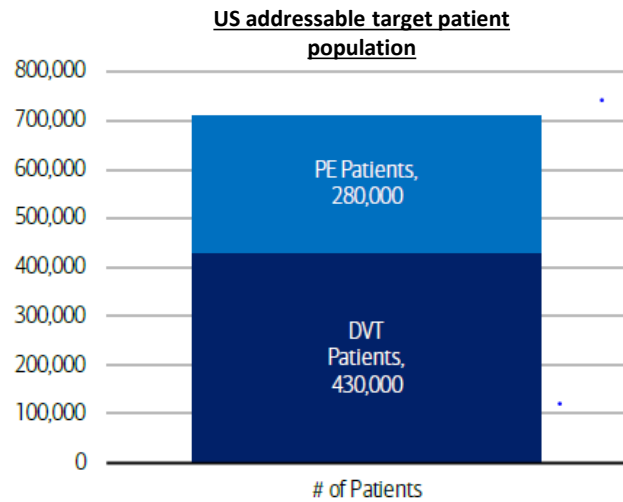
- As a result of the pandemic and increase in hospitalizations, the **FDA granted Alaris medical necessity pathway** which allowed hospitals to access the pump prior to 510(k) clearance
- In **April 2021**, Becton Dickinson submitted the **510(k)** to the **FDA** which remains under **active review**. Management originally anticipated approval in 2H FY22, however **given the length of the filing, BDX no longer expects approval in FY22**



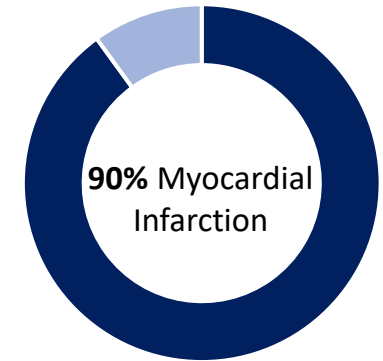
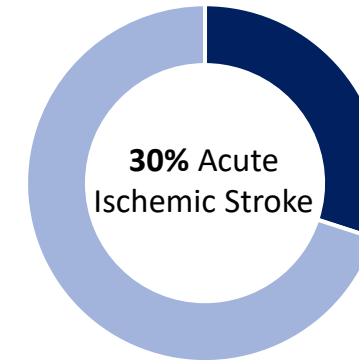


Venous still mostly lytics but mechanical moving to standard of care

Market Remains Large and Under Penetrated



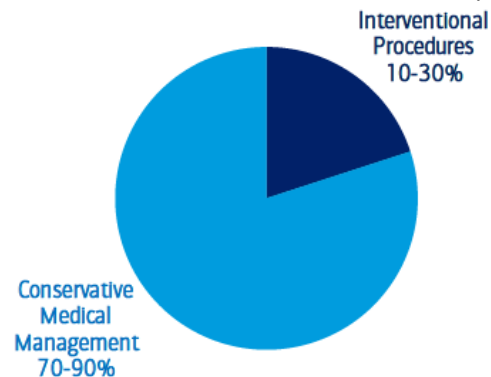
VTE Penetration Potential – market penetration proxies



VTE market could reach 60% penetration, using 30% acute ischemic stroke and 90% myocardial infarction market penetrations as proxies

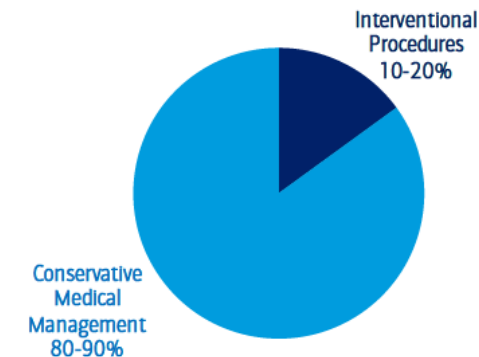
Deep Vein Thrombosis:

Inari estimates that between 70-90% of target DVT patients are treated with medical management and 10-30% are treated with an interventional procedure (3% being ClotTrieve)



Pulmonary Embolism:

Inari estimates that roughly 80-90% of target PE patients are treated with medical management and 10-20% are treated with an interventional procedure (5% being FlowTrieve)

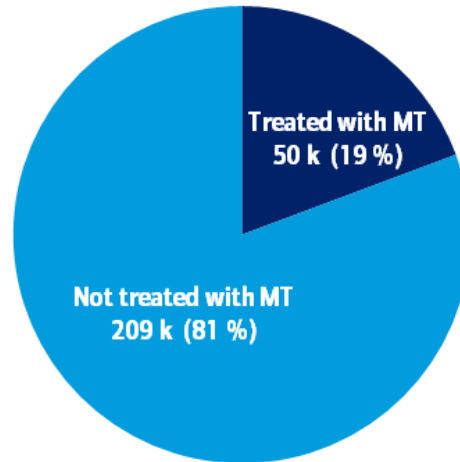




Arterial market today and new entrant

Arterial market addressable population and current treatment

Penumbra estimates there are at least **259,000 patients in the US each year** who are treated for acute limb ischemia (ALI) and **mechanical thrombectomy accounts for less than 20% of these treatments**



Key market players today

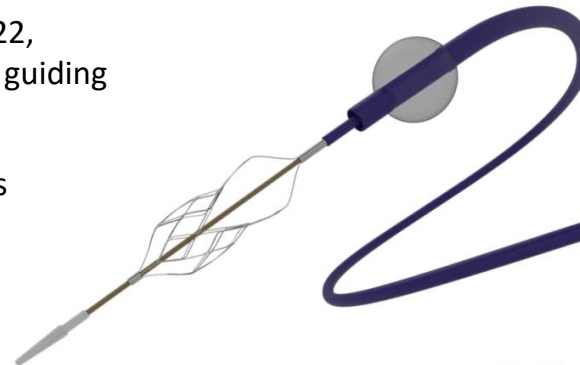
Penumbra: Lightning 7



Inari expansion to arterial ...limited market release

- Limited market release of Inari's Artix System in 2022, consisting of Artix MT Device and Artix BG (balloon guiding sheath)
- Sheath has 4x flow rate of existing arterial catheters
- Proximal flow arrest to prevent distal embolization

Inari: Artix System



Arterial Thromboembolism TAM estimates

80k

US Patient Incidence

\$600m

US TAM Opportunity



Inari and Penumbra market leaders

Peripheral Mechanical Thrombectomy Current Market Size

We estimate the **VTE market today is over \$500m between Inari and Penumbra, which suggests the market is less than 10% penetrated today** with mechanical thrombectomy treatment. We expect the market in the near term will continue to grow driven by introduction of new products, growing clinical evidence, and increased awareness among physicians.

Peripheral Mechanical Thrombectomy Revenue (\$m) (NARI ex-stocking):														
Global	2018A	2019A	1Q20A	2Q20A	3Q20A	4Q20A	2020A	1Q21A	2Q21A	3Q21A	4Q21A	2021A	1Q22A	2Q22A
Penumbra	\$72.0	\$107.0	\$30.2	\$24.3	\$41.3	\$52.1	\$147.9	\$55.6	\$59.1	\$64.3	\$66.1	\$245.0	\$74.6	\$80.7
y/y growth (%)	47%	49%	28%	-4%	49%	73%	38%	84%	143%	56%	27%	66%	34%	37%
Inari Medical (ex-stocking)	\$5.6	\$41.0	\$22.7	\$22.9	\$33.8	\$42.3	\$121.7	\$50.7	\$53.4	\$60.4	\$70.3	\$234.8	\$78.8	\$80.6
y/y growth (%)		632%	321%	188%	202%	157%	197%	123%	133%	79%	66%	93%	55%	51%
Total	\$77.6	\$148.0	\$52.9	\$47.2	\$75.2	\$94.4	\$269.7	\$106.3	\$112.5	\$124.7	\$136.4	\$479.9	\$153.4	\$161.3
y/y growth (%)		91%	83%	41%	93%	102%	82%	101%	138%	66%	44%	78%	44%	43%

*PEN 1Q22 is 43.2% y/y less \$5m benefit from CHN pull-forward



And lots of other competition coming as well...can pricing hold up?

Clot Management	Device	Characteristics	Timelines
Peripheral			
PEN	Indigo	Aspiration based - CAT3/5/6/8/D	On market
PEN	Lightning 12	Aspiration based thrombectomy	On market
NARI	ClotTrier	Mechanical and aspiration thrombectomy/embolectomy	2017 approval
BSX	AngioJet	Pharmacomechanical thrombectomy, with aspiration and Power Pulse (lytic delivery mechanism)	2015 approval
BSX	WOLF Thrombectomy	Mechanical thrombectomy device acquired from Devoro medical	LMR 2H22
ABT	JETi (Walk Vascular)	Mechanical aspiration thrombectomy system	Nov 2020 Approval
MDT	TBA	Mechanical thrombectomy device	TBD
Phillips	QuickClear	Mechanical thrombectomy, aspiration based, 10fr	3Q2020 approval
BDX	Aspirex (Staub Medical)	Aspiration based thrombectomy	2Q22 approval, 2H22 launch
Thrombolex	Bashir Endo Cath	Pharmacomechanical, catheter directed lysis	2Q2019 approval
AngioDynamics	AngioVac	Continuous aspiration based mechanical thrombectomy, requires blood reinfusion	2014 approval
AngioDynamics	AlphaVac	Aspiration mechanical Thrombectomy System, does not require blood reinfusion, smaller catheters	July 2021 510k clearance
Surmodics	Revene Thrombectomy (Vetex)	Dynamic venous cage technology for predictable single session clot removal without thrombolytics	Dec 2020 approval
TruVic	Prodigy	Mechanical thrombectomy	FDA approval April 2022
Pulmonary			
NARI	FlowTrier	Stent retriever and aspiration thrombectomy/embolectomy (dual approach)	2018 approval
BSX	EkoSonic	Lytic infusion cath, low intensity sound waves enhance lytic exposure to thrombus	2014 approval
BSX	WOLF Thrombectomy	Mechanical thrombectomy device acquired from Devoro medical	Trial start in early 2022 for PE
PEN	Lightning 12	Aspiration based thrombectomy	4Q2020 approval
Surmodics	Pounce thrombectomy	Mechanical thrombectomy with basket wire assembly	TBD
AngioDynamics	AlphaVac	Aspiration mechanical Thrombectomy System, does not require blood reinfusion, smaller catheters	Mid/late 2024
TruVic	Prodigy	Mechanical thrombectomy	TBD



Shockwave Medical off like a rocket ship...and profitable...still room to grow

Peripheral: M5+ replacing M5 in the peripheral segment

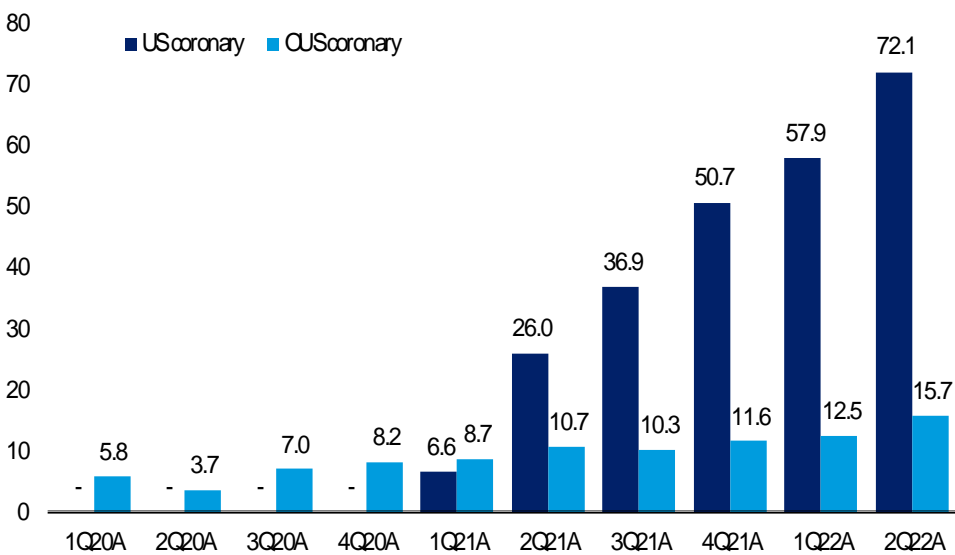
- Longer catheter shift (easier to reach below the knee), comes in an 8-millimeter diameter size (a large percentage of iliac arteries are 8mm), and doubles the pulse rate verse the M5
- M5+ ASP of \$3,200 -\$3,300 vs M5 ASP of ~\$2,700.

Coronary: Impressive US coronary launch continues

- C2+ on the horizon - OUS limited launch 2H/22, US launch 2023

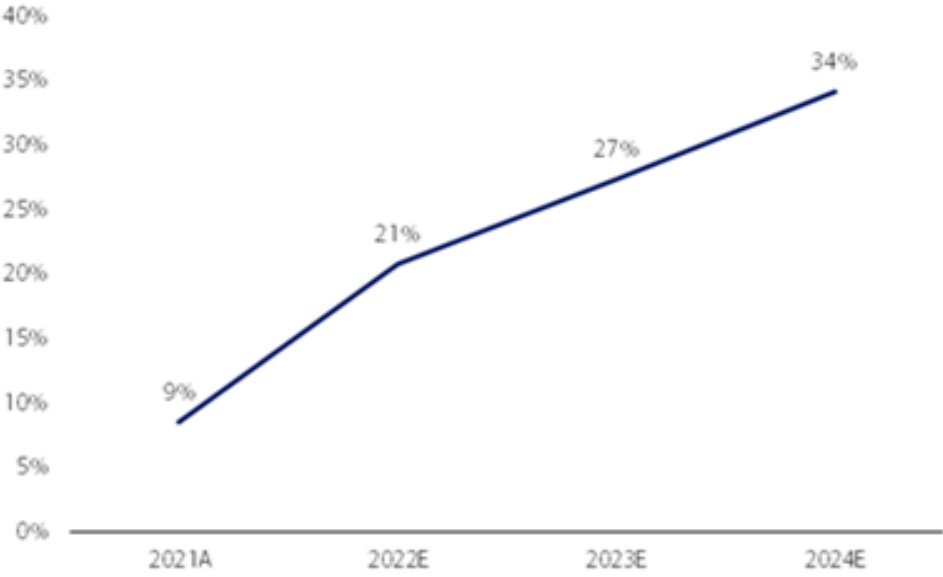
Profitability ramping fast

- Street expects 25% OM in 2023 vs 23% in 2022 and 0% in 2021



Source: Company filings, BofA Global Research

US Coronary Penetration



Medtech M&A





Large cap medtech has around \$150bn+ of M&A capacity

...and many balance sheets better today than 2019

	2019					2021					Change in Net Leverage	Change in Fire power
	Cash	Debt	EBITDA	Net Leverage	M&A Firepower	Cash	Debt	EBITDA	Net Leverage	M&A Firepower		
Abbott	4,140	18,139	8,188	1.7x	10,565	10,249	18,050	12,815	0.6x	30,644	-1.1x	20,079
Baxter	3,335	5,035	2,726	0.6x	6,478	2,951	17,450	2,992	4.8x	0	4.2x	-6,478
Becton Dickinson	568	19,405	5,201	3.6x	0	1,911	17,424	5,273	2.9x	306	-0.7x	306
Boston Scientific	217	10,008	3,112	3.1x	0	1,925	9,065	3,363	2.1x	2,949	-1.0x	2,949
Edwards	1,517	594	1,401	-0.7x	5,126	1,467	596	1,722	-0.5x	6,036	-0.2x	910
Intuitive Surgical	3,222	0	1,988	-1.6x	9,185	4,204	0	2,625	-1.6x	12,080	0.0x	2,895
Johnson & Johnson	19,381	27,696	28,255	0.3x	76,450	31,608	33,751	25,476	0.1x	74,285	-0.2x	-2,165
Medtronic	11,628	25,576	10,075	1.4x	16,277	11,221	25,155	11,144	1.3x	19,499	-0.1x	3,222
Teleflex	301	1,859	734	2.1x	645	445	1,740	865	1.5x	1,301	-0.6x	657
Stryker	4,425	11,090	4,222	1.6x	6,000	3,019	12,479	4,753	2.0x	4,800	0.4x	-1,200
Zimmer Biomet	618	8,221	2,610	2.9x	227	479	7,069	2,487	2.7x	870	-0.3x	643
Average	4,602	12,259	6,579	1.2x	130,952	6,653	12,533	7,052	0.8x	152,769	-0.3x	21,817

Source: Company filings, BofA Global Research

Note: Average excludes Baxter

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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Tech Watch Presentation and Roundtable Discussion



Justin Hibbs

VP, Business Development &
Strategy, Aptitude



Lisa McGuire

Associate Principal, Intelligence,
Sg2

Novel partnerships to solve healthcare's greatest challenges





Vizient

TechWatch

Medical Device | Volume 4

Orthopedic and spine supplier programs to support the ambulatory care shift

AI-enabled ischemic stroke detection, triage and notification

Informed decisions found at the intersection of cost, quality and performance

Orthopedic

Orthopedic and spine supplier programs to support the ambulatory care shift

Orthopedic and spine care continue to evolve, with accelerated movement of procedures from traditional hospital-based settings to ambulatory facilities. Forward-thinking providers, along with orthopedic and spine product companies, are beginning to invest in resources to understand, predict and capitalize on these changes.

Clinical and technical advances, coupled with evidence-based patient selection criteria, now make a growing pool of patients viable candidates for outpatient surgery. Many factors come into play, however, when considering market dynamics and predicting future potential changes.

Centers for Medicare & Medicaid Services updates

Ongoing changes to site-of-care restrictions by the Centers for Medicare & Medicaid Services (CMS) are a key driver in the outpatient shift of orthopedic and spine procedures. In recent years, CMS removed key musculoskeletal services from the inpatient-only list, including total knee arthroplasty in 2018, total hip arthroplasty in 2020, and partial hip and shoulder arthroplasty in 2021. Moreover, CMS continues to expand the ambulatory surgery center (ASC)-covered procedure list, including total knee arthroplasty in 2020 and total hip arthroplasty in 2021.

In addition to its gradual removal of site-of-care restrictions, CMS recently implemented additional prior authorization requirements for cervical spinal fusion performed in hospital outpatient departments. These authorizations are not required for ASCs.

Payer pressures and the pandemic effect

Beyond CMS changes, commercial payers continue to request reviews to shift costs to ambulatory sites outside hospital campuses. For example, UnitedHealthcare has converted that more than 50% of member outpatient quality and safety services will be delivered at high-quality, cost-efficient sites of care by 2030. This move, ASCs, makes strategic sense when ASCs can offer surgical procedures for 25% to 40% less cost than hospitals.

Pandemic-fueled efforts to reduce risk and length of stay accelerated the outpatient and ambulatory shift substantially. Analysis by Iqvia, a Vizient company, data from Global Decision Technology found that 62% of primary knee replacements were performed in outpatient facilities in the fourth quarter of 2020. Similarly, Iqvia analysis of claims data found that the position of replacement hip, inpatient, ambulatory primary hip of 2019 to 2020 in the fourth quarter of 2020, with 50% performed in a hospital outpatient department and 15% performed in an ASC.



Vizient TechWatch | Medical Device | Volume 4, 2022



- Health Systems are leveraging partnerships in novel ways after COVID-19 exposed vulnerabilities.
- Hospitals are more open to new technology, such as AI, to help them be more proactive and reach at-risk populations.
- Collaboration and transparency are helpful in optimal patient care and overall industry growth

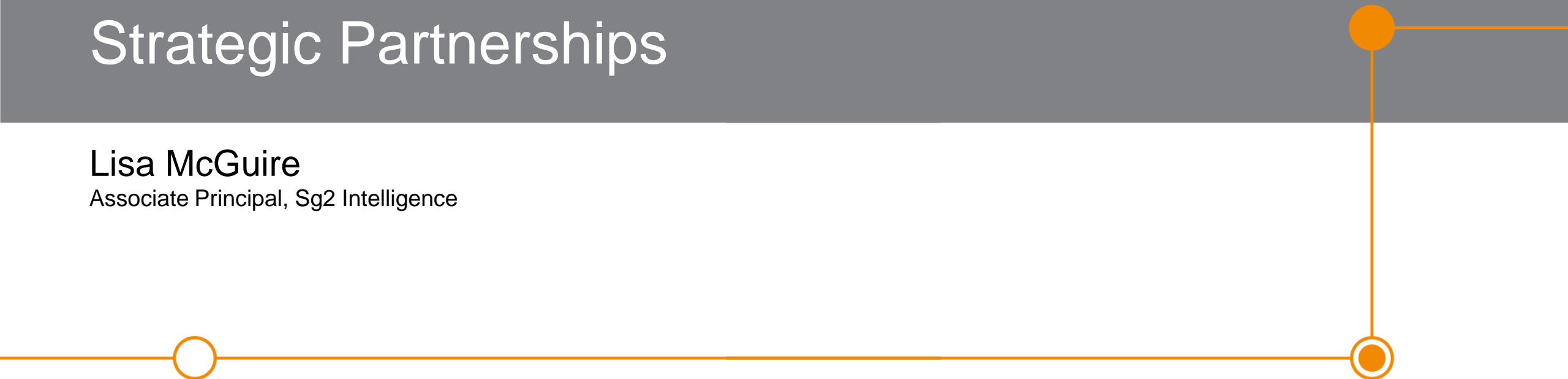
Every week, we see headlines about new strategic partnerships and collaborations that are forming in healthcare....

- BD, Labcorp collaborate to develop cytometry-based companion diagnostics for matching patients with treatments (Aug 9, Repertoire)
- Abbott and WeightWatchers partner to support people living with diabetes in attaining their health (Aug 17, Fierce Pharma)
- General Catalyst, WellSpan Health partnering on digital health (Aug 29, Modern Healthcare)

Vizient Connections 2022 Strategic Partnerships

Lisa McGuire

Associate Principal, Sg2 Intelligence



The Strategic Intent Driving Partnerships Has Evolved

The **what** remains constant, but the **why** has changed.

Fulfill a critical
public health and
safety net role

Provide an
excellent patient
experience

Advance
medicine and
care delivery

$$1 + 1 = > 2$$

Partnerships Remain a Critical Tool to Achieve Strategic Objectives

PARTNERSHIPS




- ▶ Remain independent
- ▶ Collaborate outside of traditional transactional business model
- ▶ Have “skin in the game”
- ▶ Answer solid, strategic *why*

Sg2 PARTNERSHIP TYPES



Defining Sg2 Partnership Types: Form Follows Function

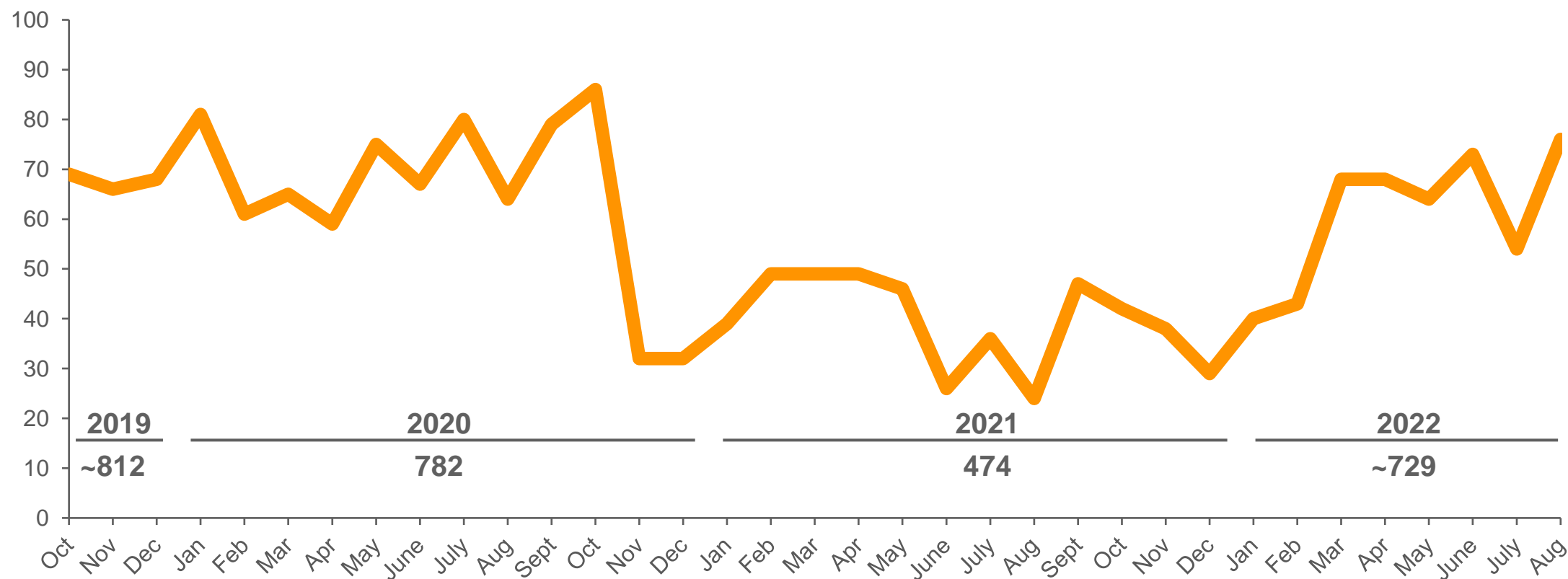
Partnership Type	Strategic Intention
 Competitors Collaborating	<ul style="list-style-type: none"> Achieve common strategic goal Defend against shared threat
 Multisystem Consortia	<p>Increase the scale of one or more functions while maintaining independence</p>
 New Community Partnerships	<p>Address Social Determinants of Health</p>

Partnership Type	Strategic Intention
 Innovation/ New Business Ventures	<p>Create new technology, business, and / or new revenue streams</p>
 Analytics/ Big Data Alliances	<p>Enhance / build “big data” capabilities</p>
 System of CARE/ Service Line Partnerships	<ul style="list-style-type: none"> Fill gaps across the care continuum Support growth Maintain / reduce costs

Endemic Partnership Numbers Have Reset To Pre-Pandemic Baselines

Partnership Totals

1961 Partnerships, October 2019–August 2022



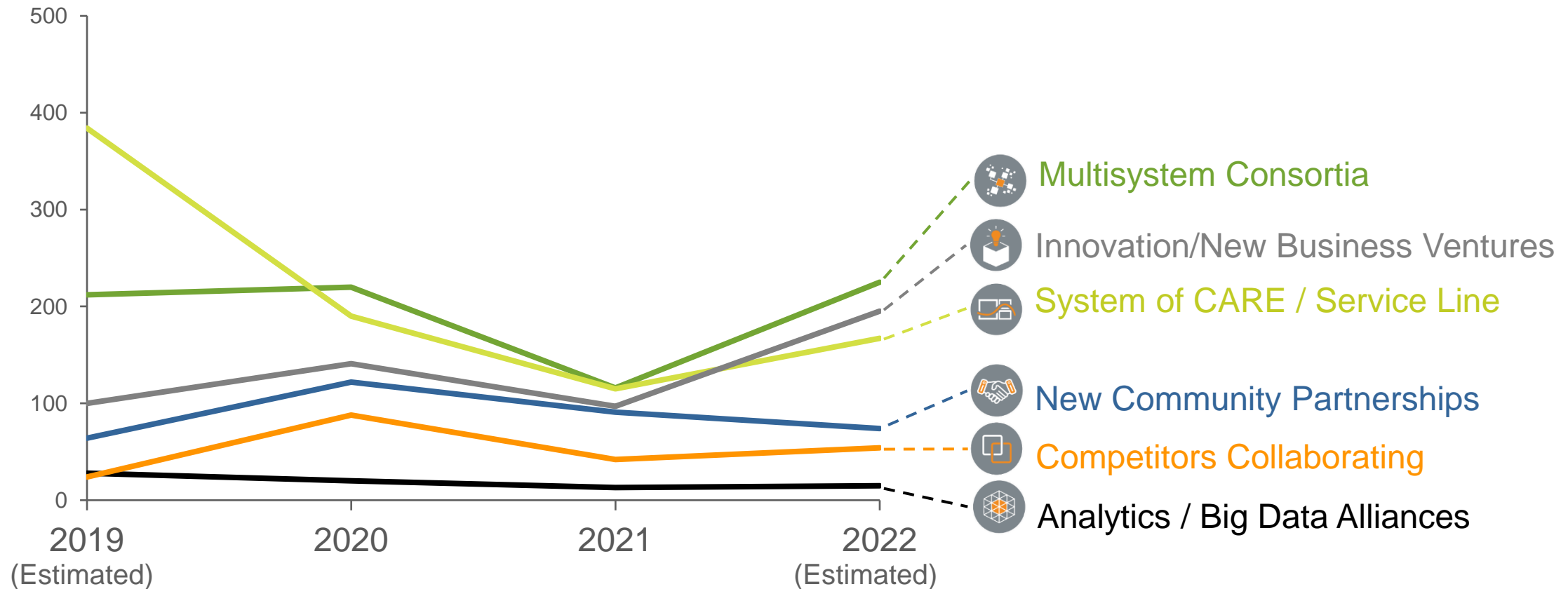
Sources: Definitive Healthcare. Partnerships: press releases, October 1, 2019–August 31, 2022. Accessed September 12th 2022; Sg2 Analysis, 2022.

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Endemic Partnerships Types Shifted From Pre-Pandemic Baselines— Emphasis on Workforce Development and New Revenue Streams

Partnership Types

1961 Partnerships, October 2019–August 2022

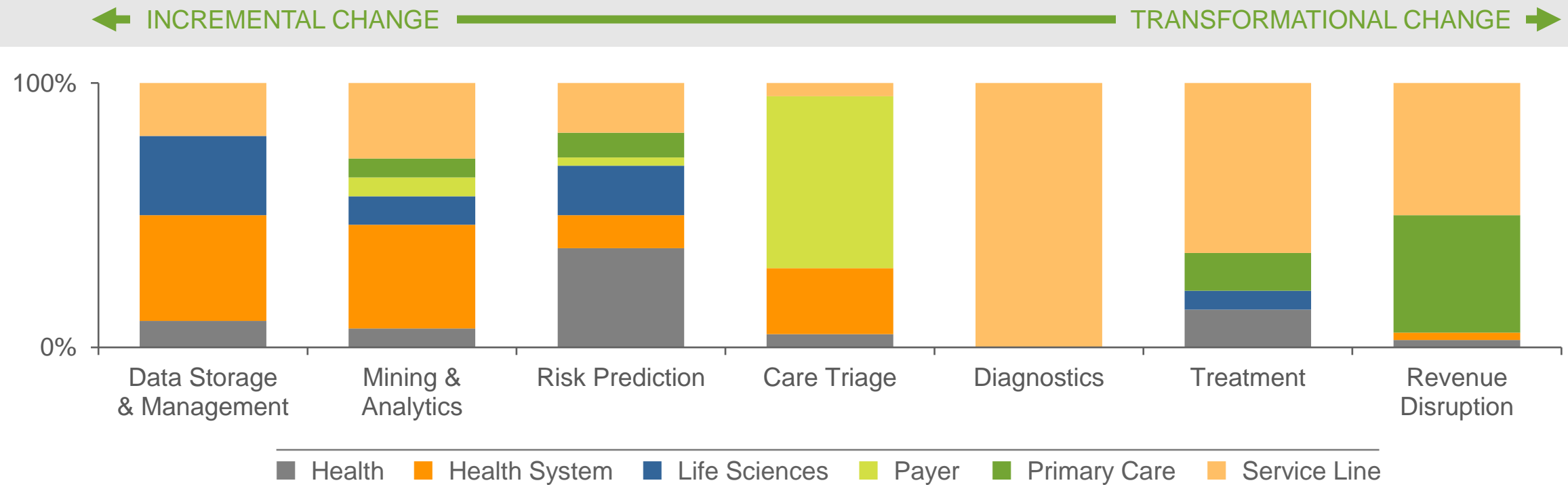


Sources: Definitive Healthcare. Partnerships: press releases, October 1, 2019–August 31, 2022. Accessed September 12th 2022; Sg2 Analysis, 2022.

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Emerging Players Flush With Cash Are Changing Health Care— Their Partnerships Add new Opportunities and Potential Threats

Who Are the 150 Most Promising Digital Upstarts Seeking Partnerships With?

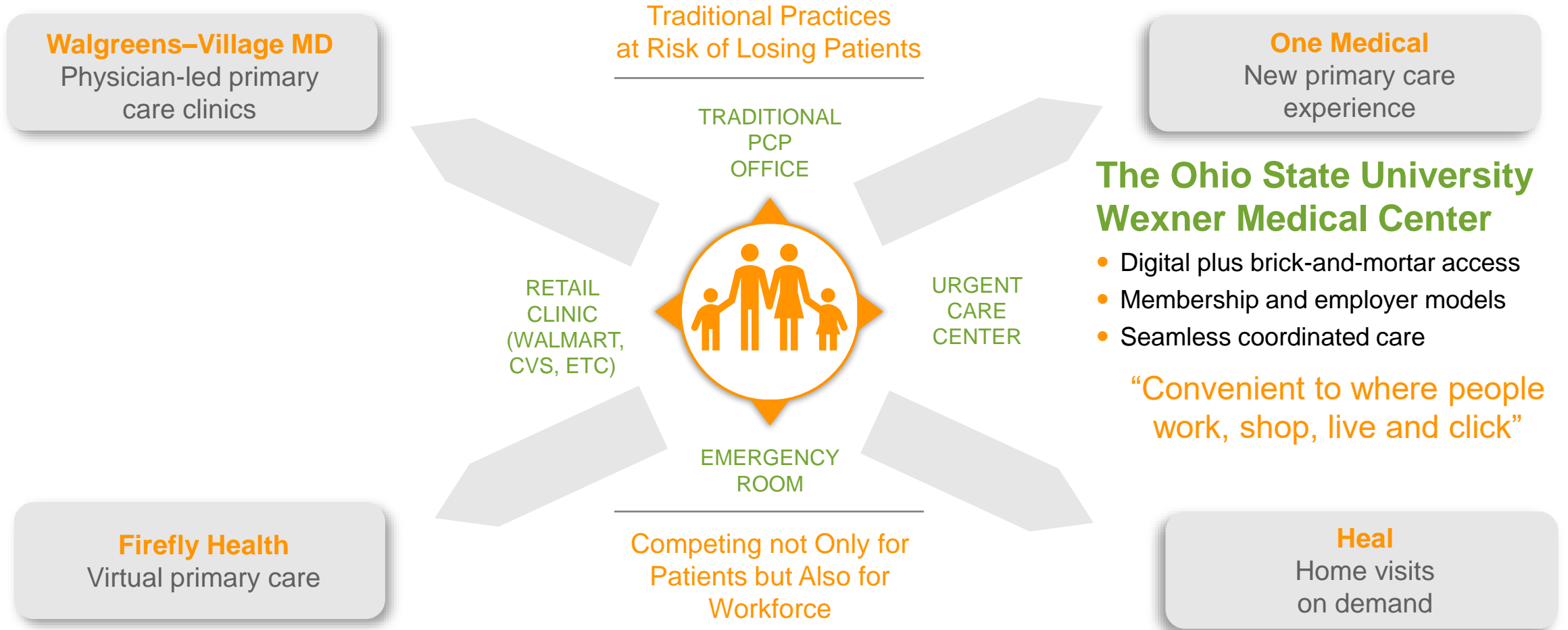


Administrative Process Automation

Payers Have Eyes on Referrals

New Patient Experiences

The Market Is Responding to Unmet Patient Preferences: How Do Provider Organizations Compete Or Partner?



Digital Health Convenor Evolves Patient Experience

Exodus of all but one of senior management team from Teledoc Health by November 2021.

In 2020:

Teladoc
Virtual Health

+

Livongo
Behavior Change



Teladoc Health

Spans Person's Entire Health Journey

- 70M international members
- Virtual medical group
- Scalable experience



Health Assurance Acquisition Corp

Partnership with Jefferson Health

- **Health Assurance care redesign:** consumer-centric, data-driven, cloud-based, continuous, personalized, proactive, engaging, rewards patient outcomes
- Designed to keep patients healthy
- Expanded to diseases with high-growth potential
- Rooted in partnerships with existing care providers
- Mission-driven, responsible innovation
- “We want to create the conditions for 1,000s of Livongos to bloom”

Hope (or Hype?):

“ The digital health sector will become **bigger than the physical health sector in terms of time and dollars spent**—experience is at the core of this transformation. ”

—Health Assurance Acquisition Corp

Digital Reckoning in 2022:

Exodus of all but one of senior management team from Teledoc Health in November 2021.

Teladoc records \$6.6B impairment charge on Livongo acquisition, spurring **record net loss** in April 2022, return to pre-pandemic valuation.







Analysts pointed to **weak enrollment numbers** for Livongo's chronic care programs, which have missed expectations in the last few quarters.

Of the 730K of 54.3M total Teledoc US members enrolled in chronic care programs, **low utilization** remains in these subscription plans sold to employers and health plans.

Need for Patient Activation

Sources: Teladoc records \$6.6B impairment charge on Livongo acquisition, spurring record net loss. HealthCareDive, April 28th 2022 ([link](#)); US Securities and Exchange Commission. Health Assurance Acquisition Corp Form S-1. October 26, 2020; Landi H. Former Livongo execs start new company and prepare for \$500M IPO. *Fierce Healthcare*. October 28, 2020; Sg2 Analysis, 2022.

Focus Frameshift in Endemic Era Changes Partnership Purpose

Partnership Type	"Refocused" Strategic Intention	Partnership Type	"Refocused" Strategic Intention
 Competitors Collaborating	<ul style="list-style-type: none"> Inspire workforce to counter burnout and grow regional health 	 Innovation/ New Business Ventures	<ul style="list-style-type: none"> Own changing referral channels and counter payer triage
 Multisystem Consortia	<ul style="list-style-type: none"> Geographic and workforce expansion without acquisition 	 Analytics/ Big Data Alliances	<ul style="list-style-type: none"> Data collection for precision medicine drug development
 New Community Partnerships	<ul style="list-style-type: none"> Build authentic relationships and leverage trust in equitable trials 	 System of CARE/ Service Line Partnerships	<ul style="list-style-type: none"> Bolster expertise to retain market relevance

Sg2, a Vizient company, is the health care industry's premier authority on health care trends, insights and market analytics.

Our analytics and expertise help hospitals and health systems achieve sustainable growth and ensure ongoing market relevance through the development of an effective System of CARE.



Sg2.com
847.779.5300

Tech Watch Roundtable Discussion

**Do you utilize strategic supplier relationships?
If so, which has been most successful?**

**How have your unique partnerships enhanced supply
assurance/resilience strategy?**

In Closing



Michael Darling

Vice President Supply Chain

Saint Lukes Health System



Brian Pollick

Administrative Director of Supply
Chain Management

University of Utah Hospitals and
Clinics



Carla Stephens

Sr Member Networks Director
Supply Chain

Vizient

2022 Supply Chain Network Opportunities



Vizient Connections Education Summit & Fall Network Meeting

Save the Date | Sept. 19-22, 2022

SCEN Connections

Mar. 10, June 23, Dec. 6

Supply Chain Leadership Series

Spotlight on Managing Spend in Clinical Procedural Areas

Top performers in price management, purchase management, purchase standardization, transaction efficiency

Date	Program
May 10	Spotlight on Managing Spend in Clinical Procedural Areas
Nov. 1	Spotlight on Managing Spend in Clinical Procedural Areas

Spotlight on Supplier Diversity

Leading practices growing relationships with minority, woman and veteran business enterprises (MWVBEs)

Date	Program
Mar. 3	Spotlight on Supplier Diversity
June 15	Spotlight on Supplier Diversity
Aug. 16	Spotlight on Supplier Diversity

Strategic Supplier Relationships Collaborative

Informational webinar Oct. 6

Enroll by Nov. 4

Clinical Supply Integration Learning Series

Virtual Session:

Date: November 8, 12-1p.m. CT



For more information, contact Carla Stephens at Carla.stephens@vizientinc.com

#vizientsummit

Vizient Networks Presentation | 2022 | Confidential Information



2022



STRONGER

vizient. **CONNECTIONS** SUMMIT

Sept. 19–21, 2022

#vizientsummit

Thank you for joining us today!

Please reach out to Carla Stephens @ Carla.Stephens@vizientinc.com and
Mike Duchock @ Mike.Duchock@vizeintinc.com with any questions

Appendix

Vizient Community

Fulfilling a growing need to connect with peers online, according to your needs

Supply Chain Executive Network senior, system-level supply chain executives are invited to participate in the network

Supply Chain Network for all supply chain team members with network access

Key Community features include group discussion forums and group resources



- **Post queries and exchange insights** with fellow members through a user-friendly web interface or via email.

- **Access group resources** cultivated by Vizient experts including exclusive presentations, webinar recordings and whitepapers.

- **Curated insights** and thought leadership sourced from your peers and subject matter experts

Vizient Community Mobile App

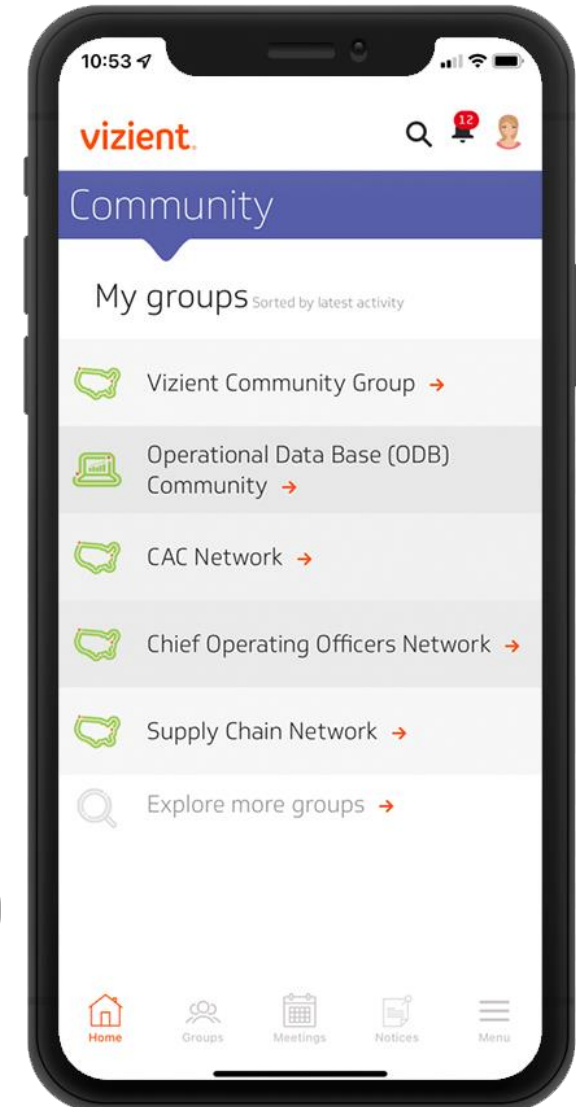
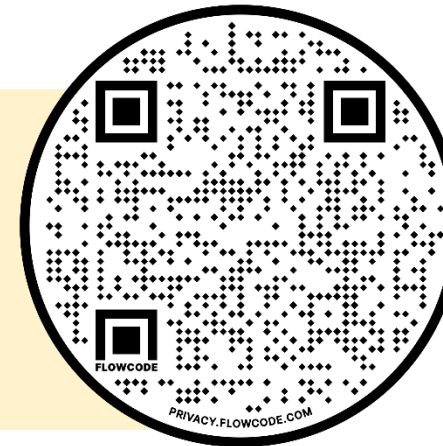
Access the power of the **Supply Chain Network** and **Supply Chain Executive Network Community** in the palm of your hand!

With the new mobile app:

- Easy to log in – biometrics unlocks the app
- Quickly review push and in-app notifications – don't rely on emails
- Tap from the member profile to call or email directly
- Create a query, respond to peers and more

Next steps:

- Scan the QR code or search for 'Vizient Community' in your app store to download and log in
- Stay connected and network with peers on the go



Supply Chain Executives Network Experience

Meetings – Virtual and live network meetings with a senior leadership focus, roundtables, and expert intelligence providing opportunities to share, learn, and improve with other members.

Supply Chain Executive Network Community – an exclusive virtual community to specifically support trusted connections among system level supply chain leaders to advance data sharing, comparative analytics, and improvement initiatives.

Connections– on trending topics as they are evolving to advance member driven solutions.

Expert intelligence and resources – access to thought leadership and SMEs to solve your most challenging problems in cost, quality, and market performance by sharing insights and leading practices with supply chain leaders.

Access to educational offerings and other resources for extended teams – Clinical and operational staff in supply chain advance improvement efforts that align with strategic decisions. In 2022, access the Clinical Supply Integration Series, Strategic Supplier Collaborative, Reducing Variation: Indirect Spend Benchmarking Study, Supply Chain Leadership Series, and Value Analysis Fundamentals Workshop.

eConnect – a bi-monthly Supply Chain publication sharing the latest news and insights from Vizient targeted specifically for our network.

2022 Supply Chain Executives Network Calendar

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SCLS: Spotlight on Managing Spend in Clinical Procedural Areas					10						1	
SCLS: Spotlight on Supplier Diversity			3			15		16				
Network Meetings			10			23			19-22			6
Reducing Variation: Indirect Spend Benchmarking Study		23										
Advisory Committee Meetings	20	17	17	21	19	16	21	18	15	20	17	15
Connections Education Summit & Network Fall Meeting									19-22			
Supply Chain eConnect		✓		✓		✓		✓		✓		✓
Value Analysis Fundamentals Workshop			1,3, 8, 10							18, 20, 25, 27		

#viziensummit

Strategic Supplier Relationships Collaborative

The purpose of this collaborative is to explore and improve an organization's strategic supplier relationships by leveraging the performance improvement framework for enhanced organizational success.

Benefits of participating

- Gain expertise in how to leverage a performance improvement framework to improve organizations' strategic supplier relationships
- Understand common obstacles to managing strategic supplier relationships

Targeted participants

- Strategic supplier relationship responsibility, supply chain, supply diversity, CSO, CFO, COO sourcing/contracting, CQVA, quality

Enrollment

- Informational webinar Oct. 6
- Enroll by Nov. 4

Potential impacts from participation

- Improving organization and supplier experience and satisfaction
- Increasing efficiency and effectiveness of strategic supplier relationships
- Increasing engagement between suppliers and stakeholders

Requirements

- Six-month commitment: 2 - 3 hours per week
- Data submission: TBD

Domain: Efficiency

For more information: latammy.marks@vizientinc.com

Our scale fuels unique value



Data and analytics

Unparalleled data enables actionable, expert-delivered insights

1,000+

Clinical Data Base (CDB) facilities

600+

Operational Data Base (ODB) members

175+

Procedural Analytics members

90+

Clinical Practice Solutions Center (CPSC) members org



Expertise

Recognized industry expertise with specialists in process improvement and knowledge transfer

4th largest health care consulting firm as ranked by *Modern Healthcare* in 2020

>190 sourcing experts — ~100 with category-specific focus

>365 consultants



Peer collaboration

Vizient brings members together to learn from the collective knowledge and insights of peers, helping them improve faster than they could on their own.

>14,600

Executives and leaders

>25

networks

>1,350 hospitals in Member Networks offering

There are no coincidences

Top-ranked hospitals consistently participate in Member Networks



U.S. News and World Report Best Hospitals

The Top 20 hospitals utilize both the Vizient Clinical Data Base and Member Networks.



Vizient Quality and Accountability Rankings

100% of the Top 10 Q&A performers in all four cohorts participate in Member Networks.



Centers for Medicare & Medicaid Services

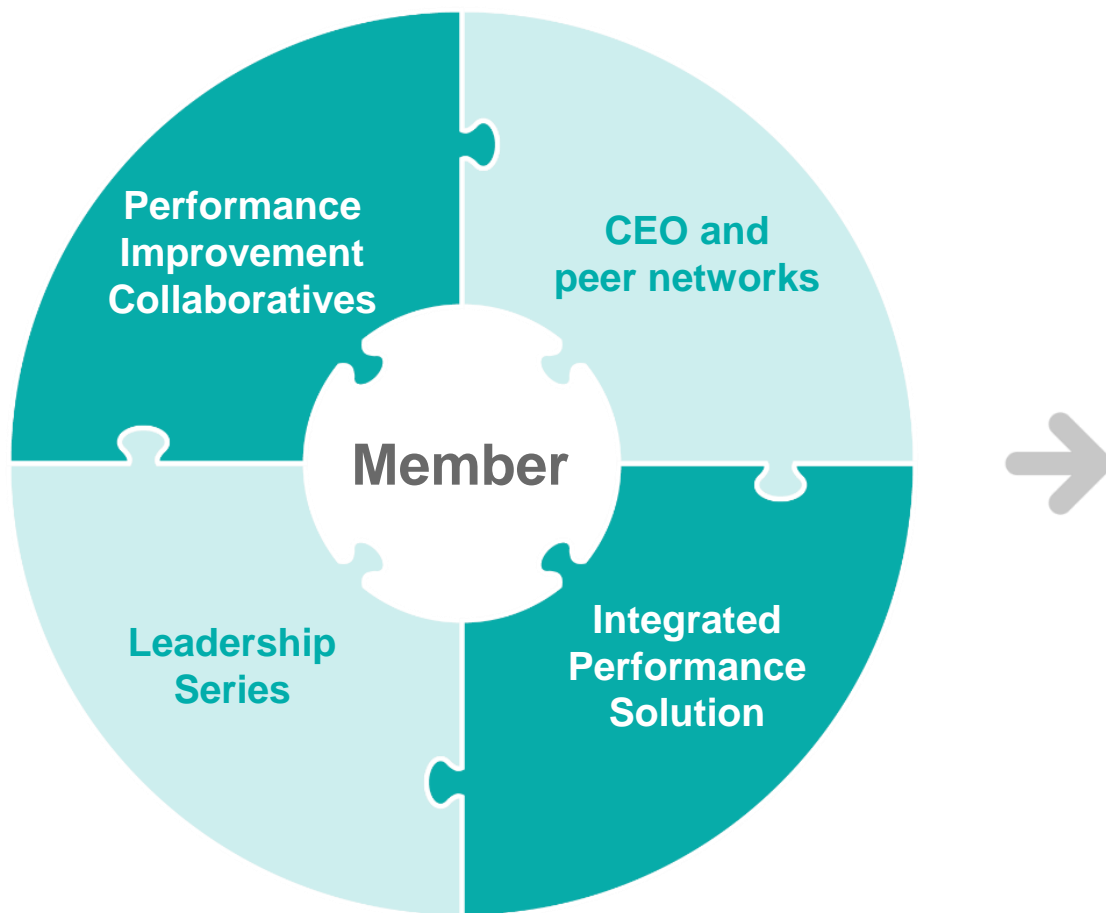
Centers for Medicare & Medicaid Services

Average star ranking

- Vizient + CDB + Member Networks = **3.51**
- No Vizient relationship = **3.06**

Accelerate performance, improve together

Member Networks offering



Vizient Member Networks

Members can only achieve **preeminent performance and market sustainability** by working together. Active engagement in Vizient Member Networks empowers participants to:

- **Improve organizational performance** and excel in three areas: Growth Strategy, Care Delivery Excellence and Expense Management
- **Address emerging opportunities** and anticipate future disruption
- **Expand reach and jump-start results** based on peer learnings, data and insights
- **Benefit from trusted, long-term relationships** with peers and industry influencers

Accelerate performance through networks

Networks create meaningful connections and trusted relationships for today's healthcare leaders. All networks are member-driven with a governance committee.

CEOs^a

- Executive Networks
- Community-based Independent Health System
- Large IDN CEO Network

C-suite^a

- Chief Financial Officers
- Chief Operating Officers
- Chief Strategy Officers
- Chief Medical Executives
- Chief Nurse Executives
- Chief Quality Executives

Senior leadership

- Ambulatory Care
- Diversity and Inclusion
- Global Executive Services
- Health Equity
- Human Resources Officers
- Marketing Officers
- Payer Strategies
- Pharmacy
- Supply Chain
- System Advanced Practice Executives

Service line strategic

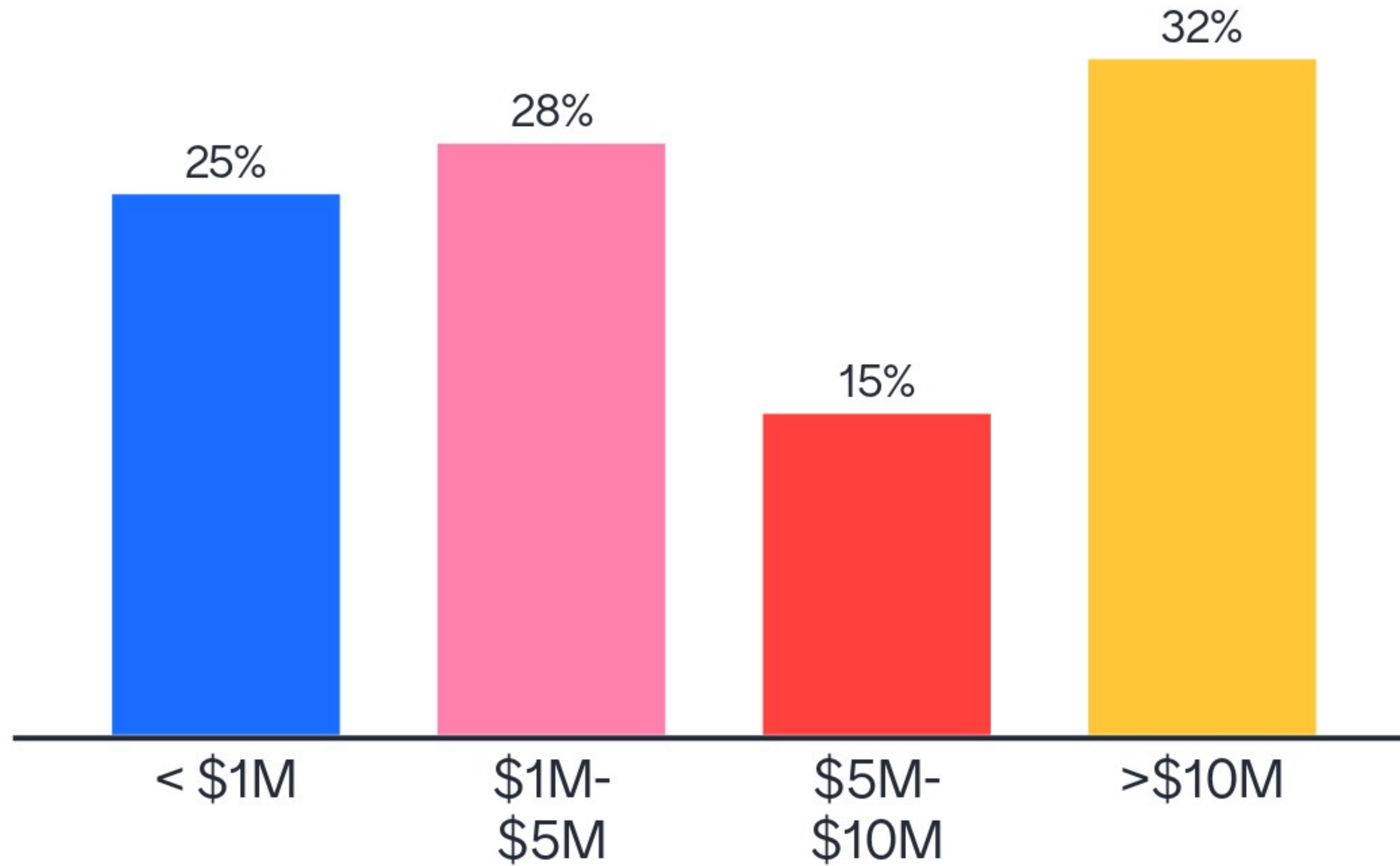
- Cancer
- Cardiovascular

Discipline

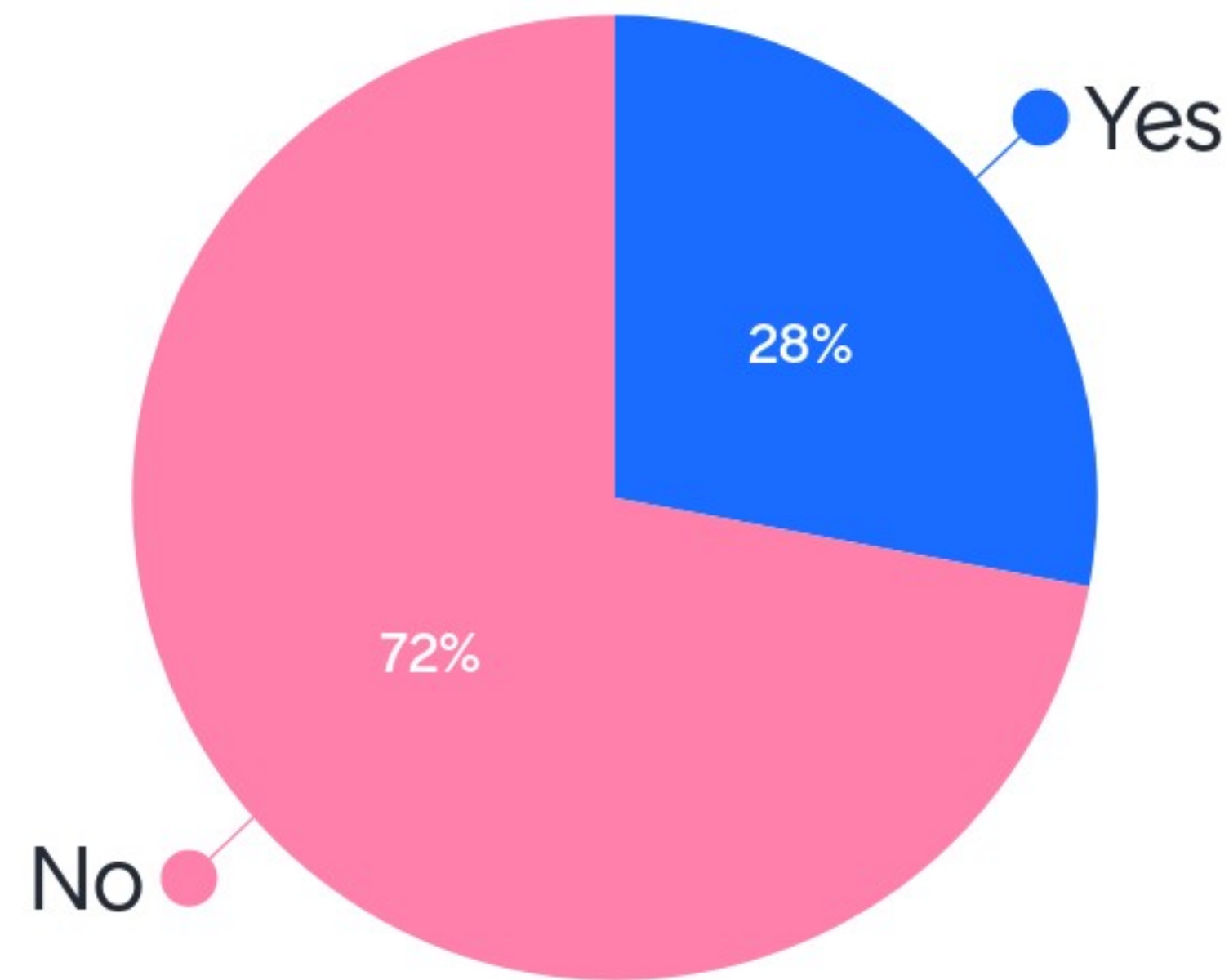
- Imaging
- Laboratory
- Legal and Compliance
- Perioperative
- Physician Practice Leaders
- Respiratory Care
- Risk Management

^a CEO and C-suite networks may also offer AMC or system meeting opportunities.
Abbreviations: AMC = academic medical center; CEO = chief executive officer; IDN = integrated delivery network.

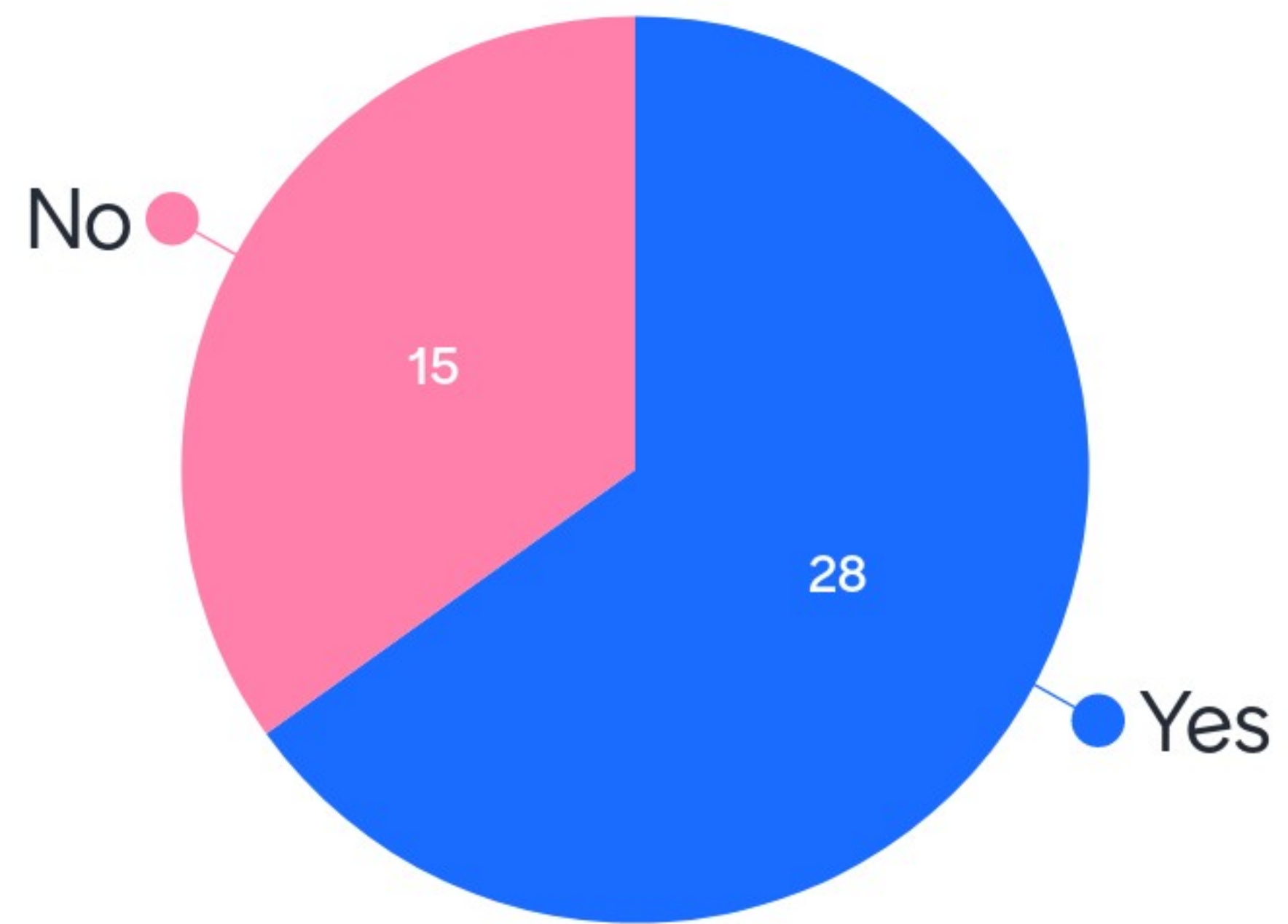
What is your 'guesstimate' of COVID PPE- related dead inventory?



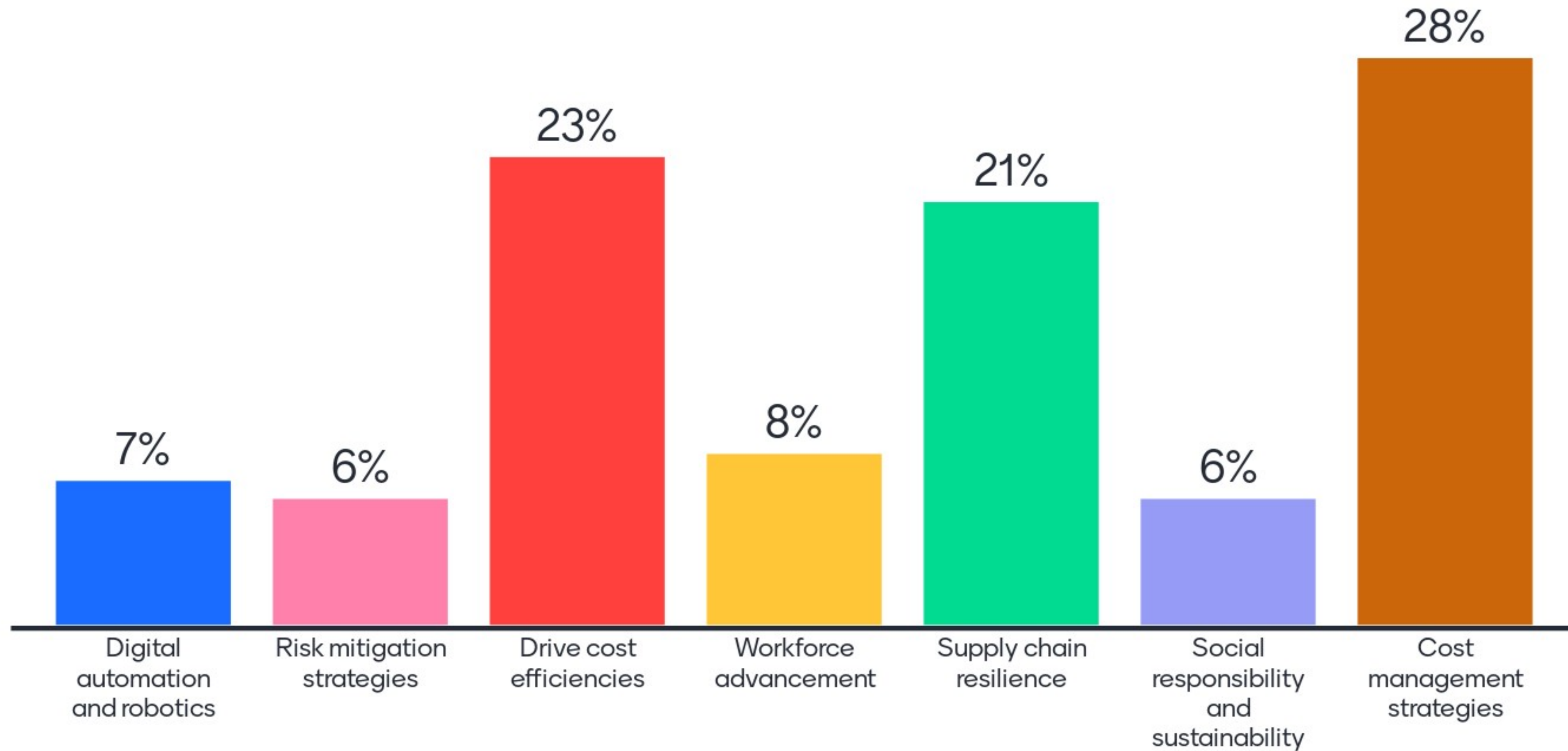
Is your Supply Chain producing revenue, through business ventures, that cover your supply chain staffing expenses?



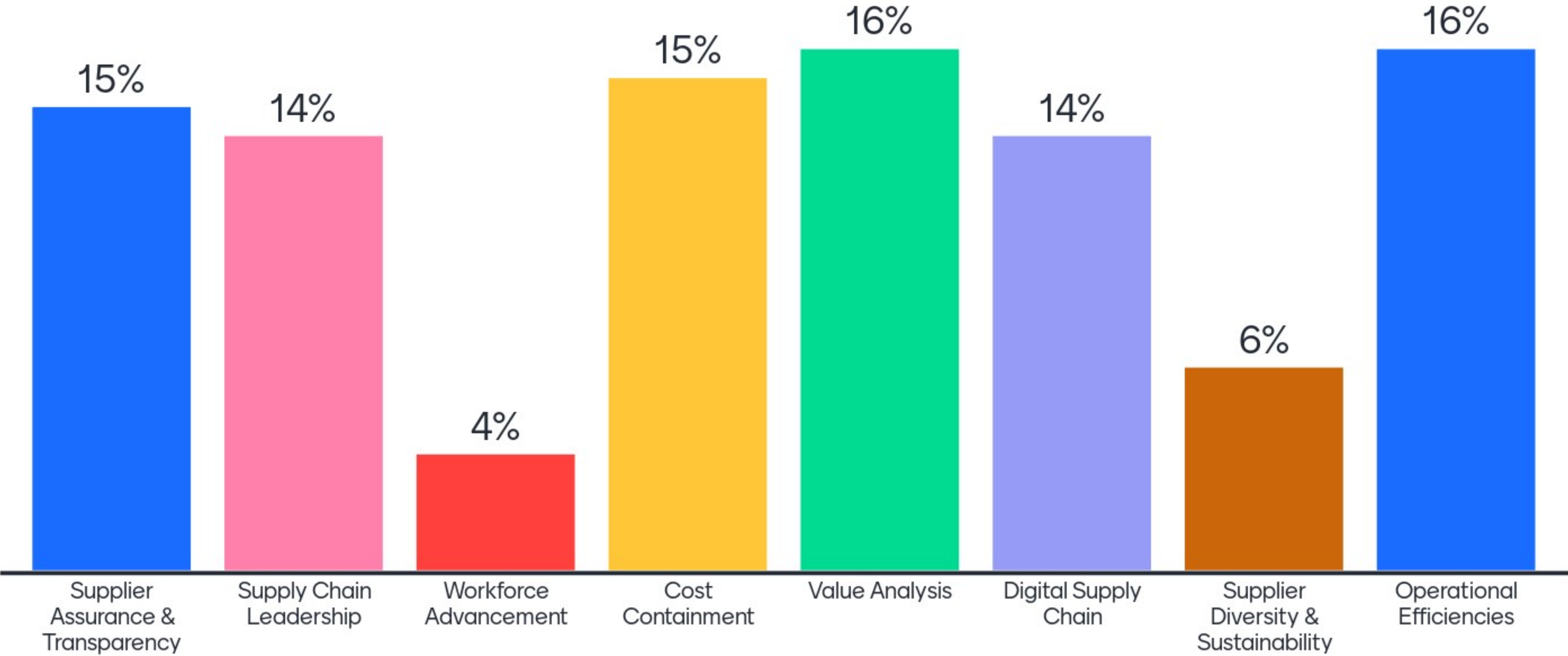
Is Supplier Diversity & sustainability one of your supply chain's top five priorities?



What are your top priorities for 2023?



Which strategies would you like to learn more and collaborative with your peers in 2023?



Which partnerships have your organization entered in the last year? (Select all that apply)

