
2023 VIZIENT CONNECTIONS SUMMIT
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we will soar
SEPT. 18–21, 2023
WYNN, LAS VEGAS
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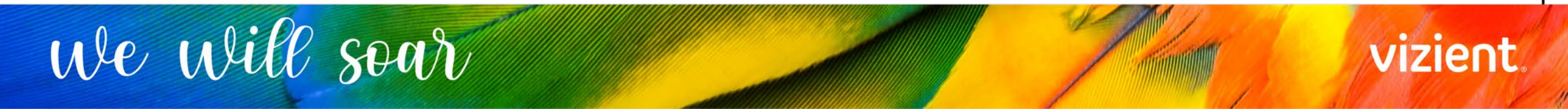
Cardiovascular Service Line Executives Peer-to-Peer Meeting

***Kate O'Shaughnessy, MS-HSM, LSSGB, CPHQ**, Senior Member Networks Director, Vizient*

***Jill Engel, DNP, ACNP, FNP, NEA-BC, FAANP,** Service Line Vice President – Heart and Vascular, Duke University Health System*



Thank you to the Cardiovascular Service Line Strategic Network Advisory Committee!

Jill Engel
(Network Chair)
Service Line Vice President – Heart & Vascular Services
Duke University Hospital

Jim Andrews, Senior Vice President, Cardiac & Neurological Services
RWJ Barnabas Health

Amy Begemann, Service Line Director, Cardiac and NeuroSciences
University Hospital – University of Missouri Health

Vikram Kashyap, MD, Vice President and Frederik Meijer Chair, Meijer Heart and Vascular Institute
Corewell Health

Eric Velazquez, MD, Cardiology Section Chief, *Yale New Haven Health*

Vince Sorrell, MD, Chief, Division of Cardiovascular Medicine *UK Healthcare*

Zachary Timm, Executive Director H&V Service Line
Froedtert Hospital - Froedtert Health

Today's agenda (9:45 – 11:45 a.m.)

- Setting the Stage: 2023 Cardiovascular Landscape
- The Rush Arrhythmia Center: Patient Centered Care Focused on Operational Excellence
- Facilitated Discussion
- Morning Wrap-Up

Lunch will be served in Encore

Re-convene in Brahms I - IV

This afternoon's agenda (1 – 3 p.m.)

Combined session with Cancer Service Line Executives

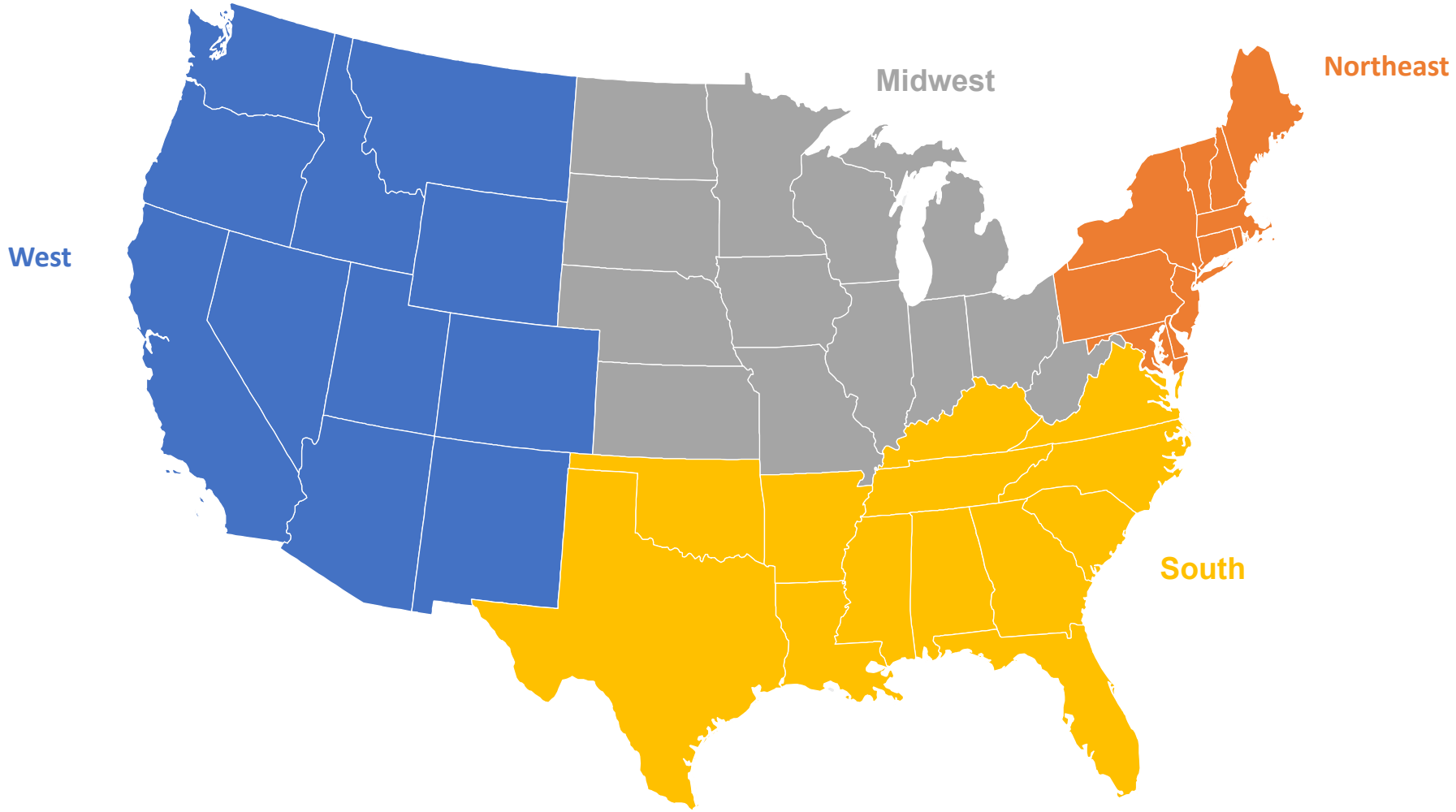
- Service Line Structures and their Financial Implications
- Building an Integrated Profit and Loss Model for Service Lines
- An Innovative, Inexpensive Method to Help Providers Feel Valued
- Wrap-Up

Join us for Interprofessional Executive Forum Sessions:

- Clinical Trial Equity: Achieving Representation and Improving Outcomes for All
- Interdisciplinary Approaches to Service Line Integration and Optimization

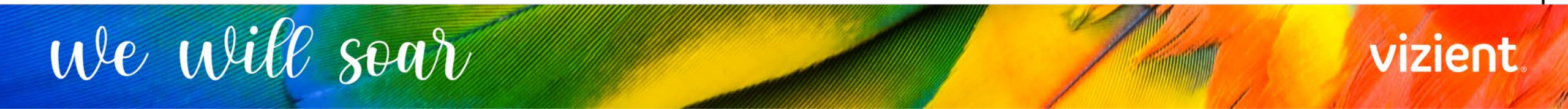
Icebreakers

Where are you coming from?



What is the most pressing issue you're currently facing?

What do you hope to gain by attending the Vizient Summit?



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No one in a position to control the content of this educational activity has relevant financial relationships with ineligible companies.

Learning Objectives

1. Discuss successful strategies to achieve high-quality, patient-centered, complex care.
2. Identify tactics to strategically expand specific cardiovascular services and increase market share.
3. Explain strategic development tools to expand clinical programs.


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Setting the Stage: 2023 Cardiovascular Landscape

***Chad Giese, MBA**, Principal, Sg2 Intelligence, Vizient*

***Josh Aaker, PhD**, Senior Consulting Director, Sg2 Intelligence, Vizient*

Increasing Cardiovascular Volumes and Visits Are Challenged by an Older, More Acute Population

IP Rising Tide of Acuity and Discharges		65+
IP Discharges	+5%	+15%
ALOS	+1%	–1%
Bed Days	+6%	+15%
Congestive Heart Failure	+10%	+16%
Transcatheter Valve Procedures	+110%	+114%

An increased need for CV services will challenge IP services even as medications, care shifts and clinical redesign temper growth.

Medicare and MA population (aged 65+) will grow to be >70% of IP discharges by 2033.

OP Procedures and Visits Are Growing		65+
OP Volumes	+22%	+31%
E&M Visits	+17%	+27%
Advanced Imaging	+31%	+45%
Major Procedures	+18%	+31%

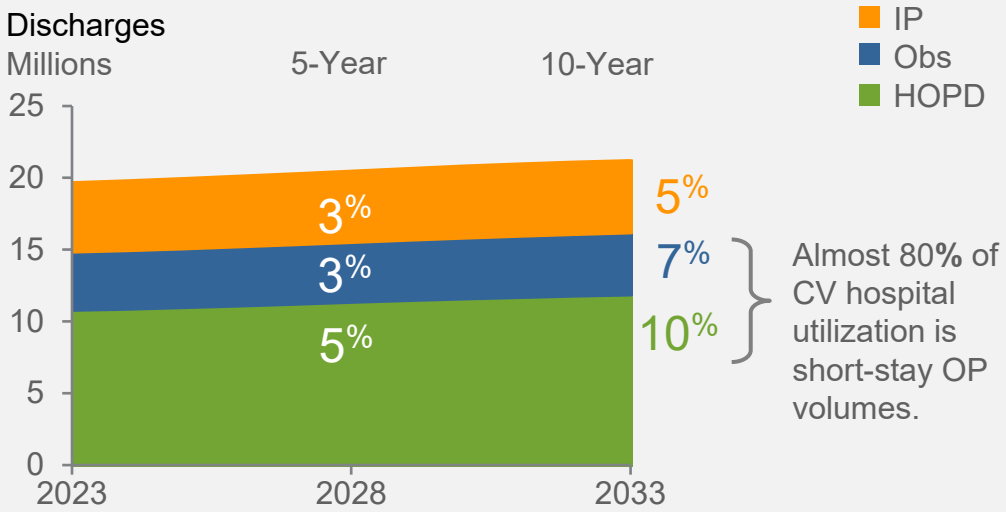
OP volumes continue to grow with an aging population, requiring more visits, imaging and procedures.

Volumes for Americans aged 65+ with chronic disease will grow faster than the total population.

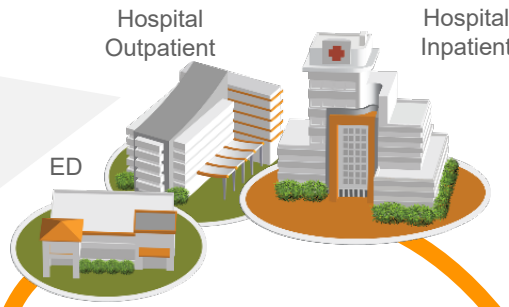
Note: Analysis excludes 0–17 age group. Percentages represent Sg2's 10-year growth forecast. E&M = evaluation and management; MA = Medicare Advantage. **Sources:** Impact of Change®, 2023; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2021; The following 2021 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2023; Sg2 Analysis, 2023.

The Hospital Remains Central for the CV System of CARE…

Hospital Cardiovascular Forecast: 8%
US Market, 2023–2033



Almost 80% of CV hospital utilization is short-stay OP volumes.



ALOS: +1% Bed Days: +6%

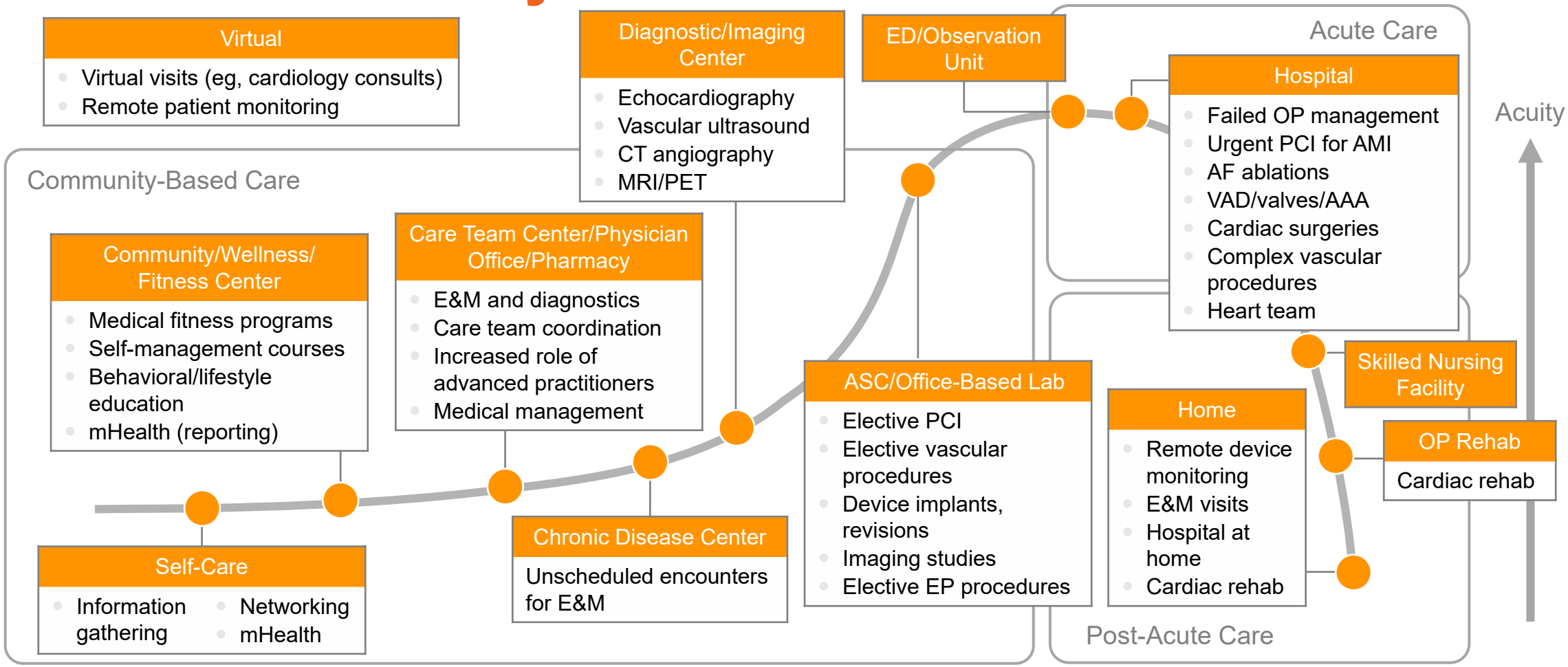
IP growth driven by: CHF (10%), MI (3%), Valve Surgery (73%), CABG (4%)

HOPD volumes increase: ILR (47%), PCI (4%), Cardiac Ablation (54%), Pacemaker/ICD (16%)

Observation visits rise: Cardiomyopathy (16%), VTE (13%), CHF (16%), Dysrhythmia (17%)

Note: Analysis excludes 0–17 age group. Hospital forecast includes the following: IP discharges; visits—observation in HOPD; HOPD procedures—major/minor; and select diagnostics in the HOPD including diagnostic catheterization, CV stress testing, EP studies and implantable loop recorders. CABG = coronary artery bypass graft; CHF = congestive heart failure; HOPD = hospital outpatient department; ICD = implantable cardioverter defibrillator; ILR = implantable loop recorder; MI = myocardial infarction; obs = observation; PCI = percutaneous coronary intervention; valve surgery = transcatheter valve procedure and surgical valve procedure; VTE = venous thromboembolism. **Sources:** Impact of Change®, 2023; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2021; The following 2021 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2023; Sg2 Analysis, 2023.

Cardiovascular System of CARE



AAA = abdominal aortic aneurysm; AF = atrial fibrillation; AMI = acute myocardial infarction; ASC = ambulatory surgery center; CARE = Clinical Alignment and Resource Effectiveness; EP = electrophysiology; PCI = percutaneous coronary intervention; VAD = ventricular assist device.

Challenges within the CV System of CARE

Prepare for rising inpatient acuity.

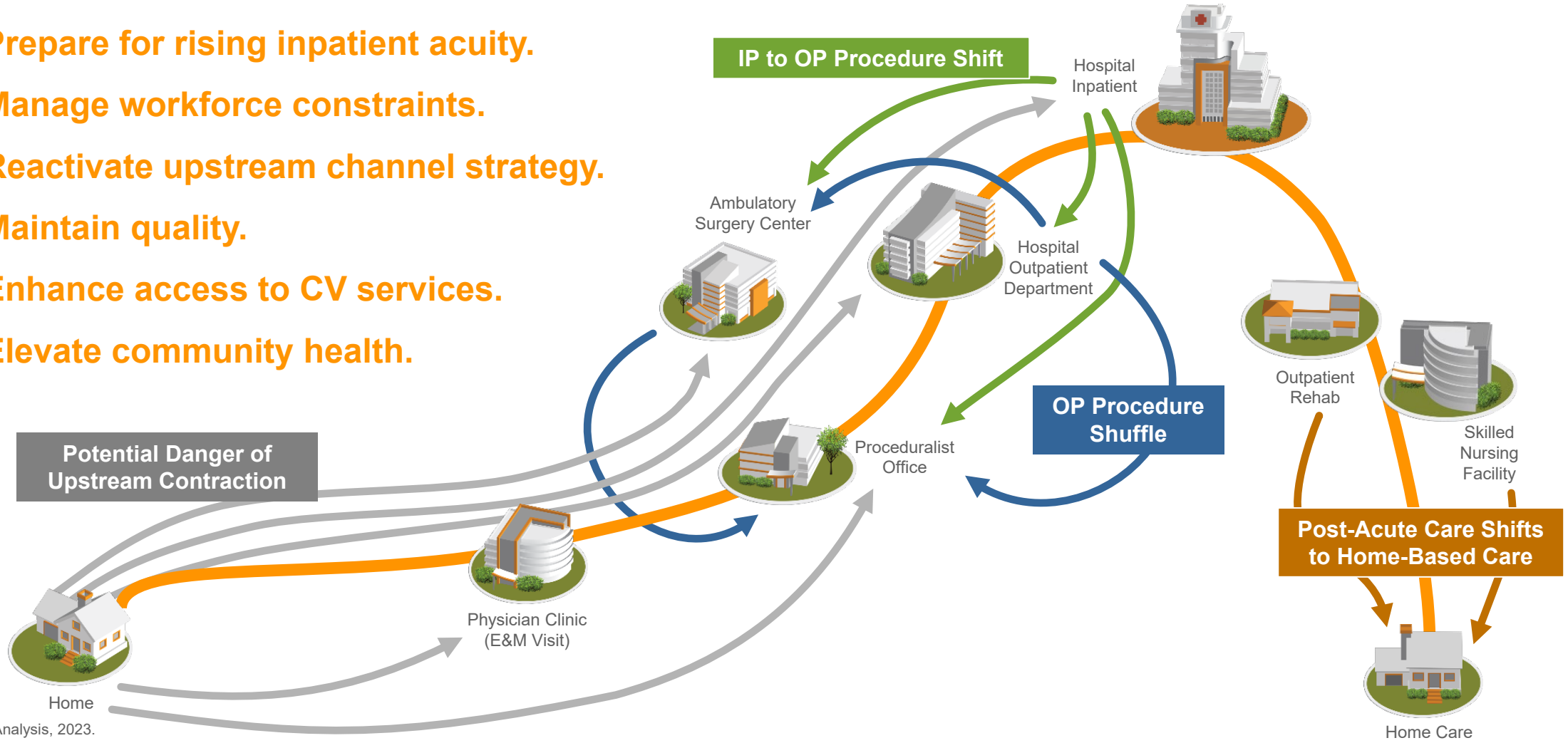
Manage workforce constraints.

Reactivate upstream channel strategy.

Maintain quality.

Enhance access to CV services.

Elevate community health.



Source: Sg2 Analysis, 2023.

Strategic Solutions to Redesign Cardiovascular Care

1. Site-of-Care Shift Creates Opportunities

2. Diagnosis and Disease Management Combines Teams and Capabilities

3. Program Development Requires Collaboration Across Resources

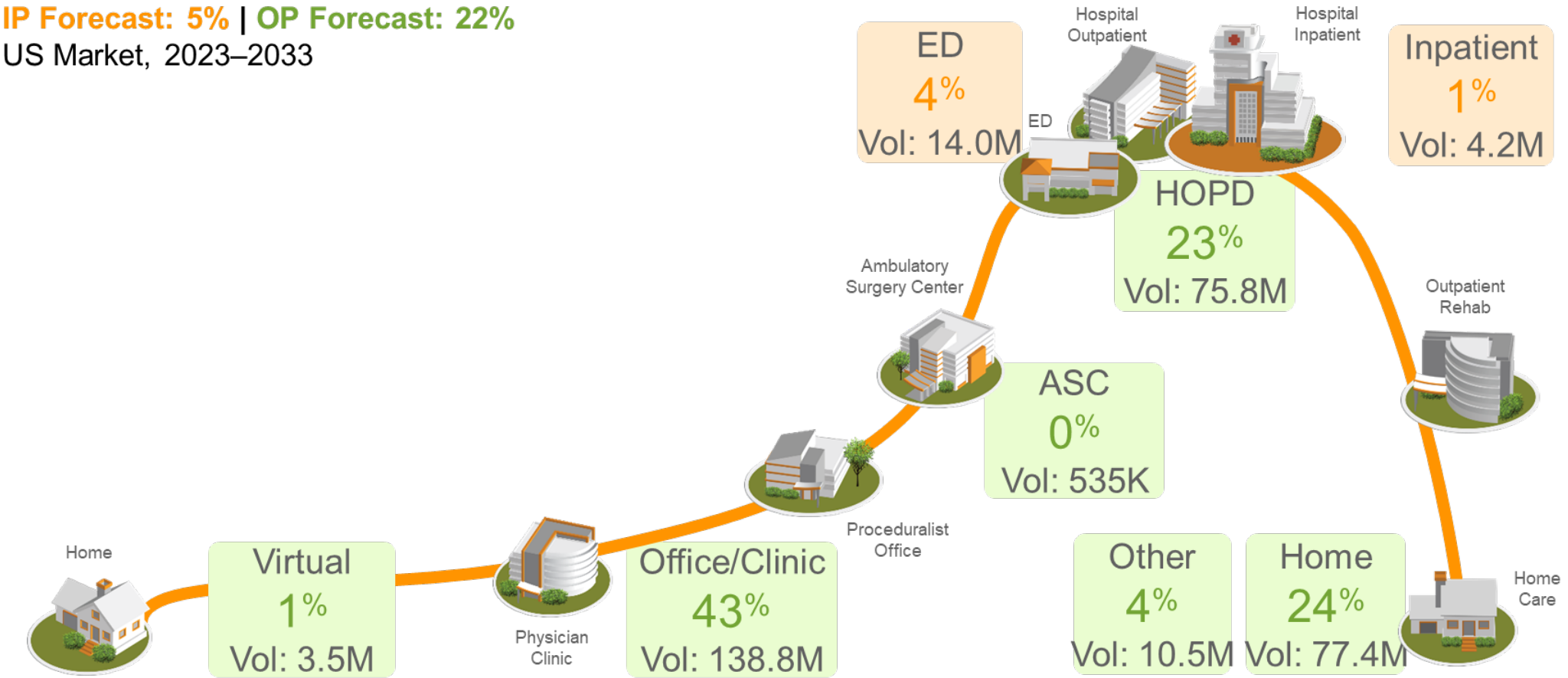
Program Development Requires Connection Throughout Your System of CARE

Collaboration Across Resources

Cardiovascular Volumes

IP Forecast: 5% | OP Forecast: 22%

US Market, 2023–2033



Note: Analysis excludes 0–17 age group. Other includes OP rehab, public clinic, retail clinic, rural clinic, skilled nursing facility, urgent care, and other site of care. **Sources:** Impact of Change®, 2023; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2021; The following 2021 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2023; Sg2 Analysis, 2023.

Program Development Requires Connection Throughout Your System of CARE

Collaboration Across Resources

CHF Cardiovascular Volumes: IP: 1.2M | OP: 53.9M
US Market, 2023
CHF Cardiovascular Forecast: **IP: 10%** | **OP: 28%**
US Market, 2023–2033

Inpatient
1%
Vol: 4.2M

HOME		OFFICE/CLINIC		INPATIENT	
Congestive Heart Failure	**52%**	Dysrhythmia	35%	**Congestive Heart Failure**	**29%**
Coronary Heart Disease and Angina	17%	Coronary Heart Disease and Angina	15%	Myocardial Infarction	20%
Disease of Venous System (Varicose Veins, Phlebitis, Hemorrhoids)	6%	Chest Pain—Noncardiac (excl Angina)	10%	Dysrhythmia	18%
Dysrhythmia	5%	Disease of Venous System (Varicose Veins, Phlebitis, Hemorrhoids)	8%		
Cardiomyopathy	5%	Peripheral Vascular Disease	7%		
		Congestive Heart Failure	**5%**		

Proceduralist Office

Office/Clinic
43%
Vol: 138.8M

Important Procedures
Standard Imaging: 27%
Advanced Imaging: 35%

Note: Analysis excludes 0–17 age group. Other includes OP rehab, public clinic, retail clinic, rural clinic, skilled nursing facility, urgent care, and other site of care. **Sources:** Impact of Change®, 2023; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2021; The following 2021 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2023; Sg2 Analysis, 2023.

Program Development Requires Connection Throughout Your System of CARE

Collaboration Across Resources

Chest Pain/CAD/MI Cardiovascular Volumes

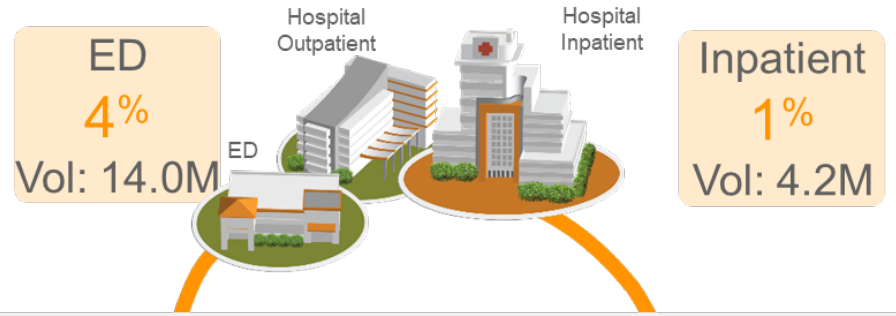
IP: 1.1M | OP: 97M

US Market, 2023

Chest Pain/CAD/MI Cardiovascular Forecast

IP: –3% | OP: 16%

US Market, 2023–2033



HOME		OFFICE/CLINIC		ED		INPATIENT	
Congestive Heart Failure	52%	Dysrhythmia	35%	**Chest Pain—Noncardiac (excl Angina)**	**65%**	Congestive Heart Failure	29%
Coronary Heart Disease and Angina	**17%**	**Coronary Heart Disease and Angina**	**15%**	Dysrhythmia	16%	**Myocardial Infarction**	**20%**
		Chest Pain—Noncardiac (excl Angina)	**10%**			Dysrhythmia	18%

Important Procedures

Diagnostic Cath IP+OP: –18%

PCI IP+OP: 5%

Standard Imaging: –5% | Advanced Imaging: 34%

Note: Analysis excludes 0–17 age group. Other includes OP rehab, public clinic, retail clinic, rural clinic, skilled nursing facility, urgent care, and other site of care. CAD = computer-aided detection. **Sources:** Impact of Change®, 2023; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2021; The following 2021 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2023; Sg2 Analysis, 2023.

Program Development Requires Connection Throughout Your System of CARE

Collaboration Across Resources

Dysrhythmia Cardiovascular Volumes

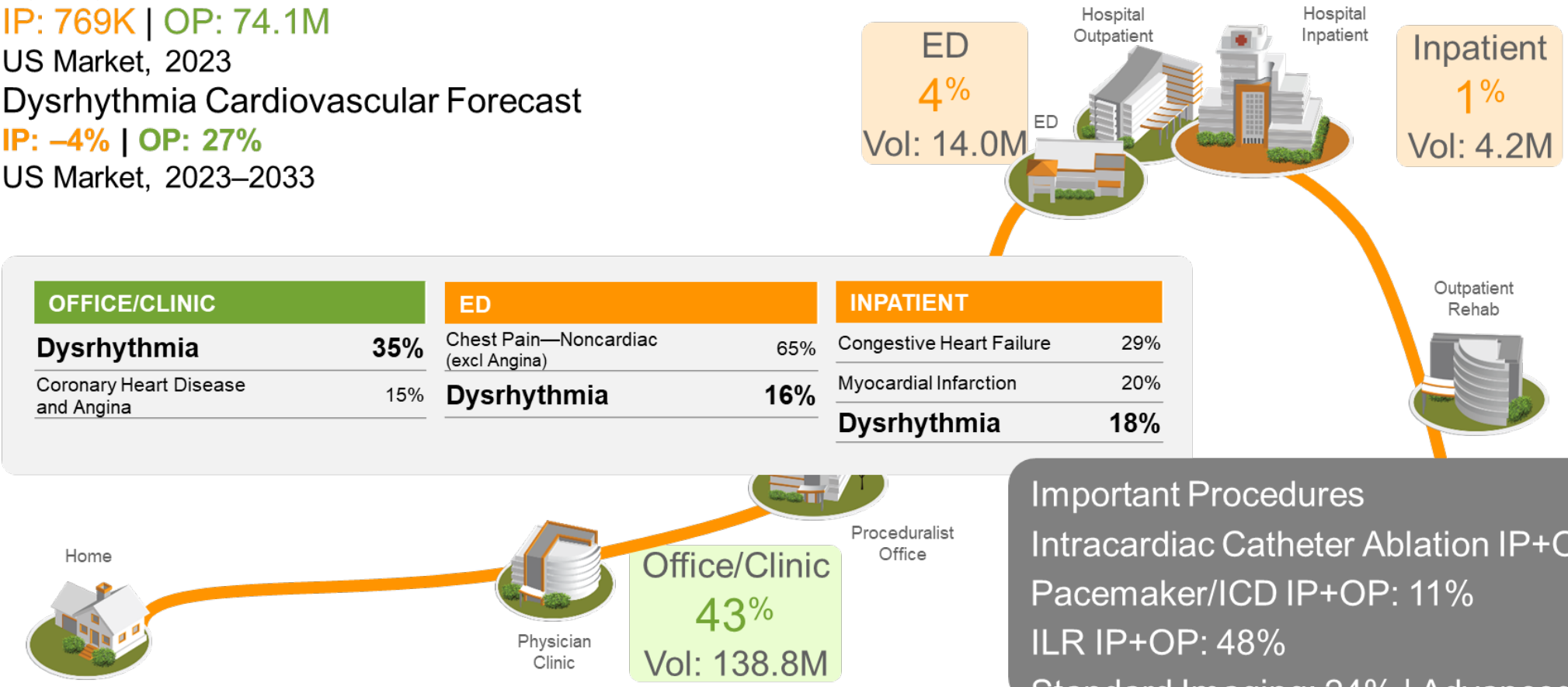
IP: 769K | OP: 74.1M

US Market, 2023

Dysrhythmia Cardiovascular Forecast

IP: –4% | OP: 27%

US Market, 2023–2033



OFFICE/CLINIC		ED		INPATIENT	
Dysrhythmia	**35%**	Chest Pain—Noncardiac (excl Angina)	65%	Congestive Heart Failure	29%
Coronary Heart Disease and Angina	15%	**Dysrhythmia**	**16%**	Myocardial Infarction	20%
				Dysrhythmia	**18%**

Important Procedures

Intracardiac Catheter Ablation IP+OP: 49%

Pacemaker/ICD IP+OP: 11%

ILR IP+OP: 48%

Standard Imaging: 24% | Advanced Imaging: 40%

Note: Analysis excludes 0–17 age group. Other includes OP rehab, public clinic, retail clinic, rural clinic, skilled nursing facility, urgent care, and other site of care. **Sources:** Impact of Change®, 2023; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2021; The following 2021 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2023; Sg2 Analysis, 2023

Key Takeaways:
Strategic Solutions to Redesign Cardiovascular Care

1. Evaluate site-of-care shift to create opportunities, understand your portfolio.

2. Leverage teams and shared resources for diagnosis and disease prevention.

3. Connect resources to grow and manage clinically collaborative programs.

Questions?

Contact:

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Chad Giese, chad.giese@vizientinc.com

This educational session is enabled through the generous support of the Vizient Member Networks program.


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The Rush Arrhythmia Center: Patient-Centered Care Focused on Operational Excellence

***Hannah Cooper, MBA**, Program Manager - Heart & Vascular, Rush University Medical Center, Chicago, Ill.*

***Anne Krukowski, MHA**, Director, RUMG Practice Operations - Heart & Vascular, Rush University Medical Center, Chicago, Ill.*

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Overview

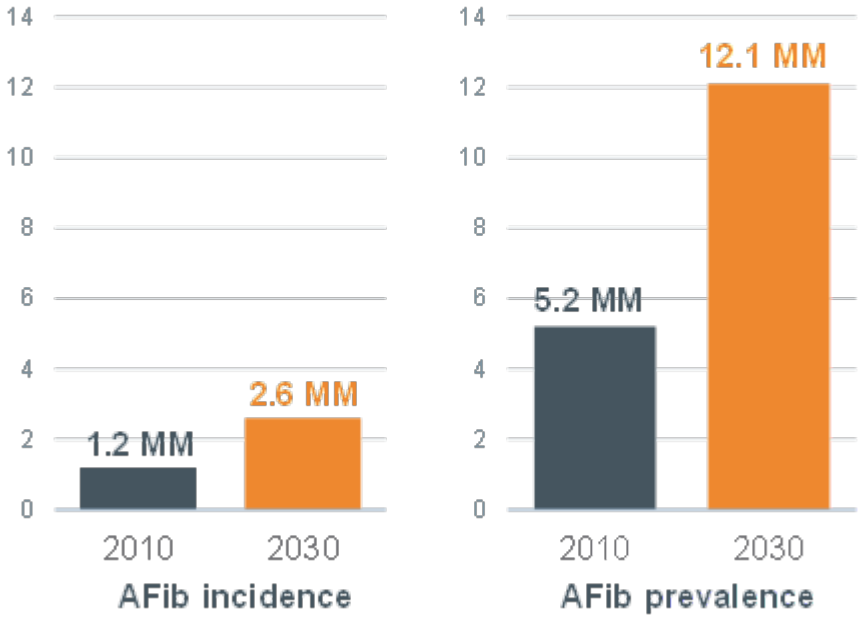
In urban locations, growth and expansion are vital to the survival of large medical facilities. At Rush University Medical Center, we utilized historical volume and market share data to drive the restructuring and rebranding of the electrophysiology program. We formed the Rush Arrhythmia Center (RAC), focused on keeping the patient at the center of workflows and complex care coordination. Since its inception, the RAC has seen increases in clinic and procedure volumes, patient access, patient satisfaction, and internal referrals. Additionally, there has been no change in complication rates, length of stay index, 30-day readmission rates or mortality index.

Background

- Arrhythmias account for frequent ER visits and hospital readmissions
- AFib on its own accounts for more than 454,000 hospitalizations each year in the United States
- 17% of admitted patients in the US have some type of arrhythmia, and are frequently readmitted

US incidence of AFib projected to more than double[1]

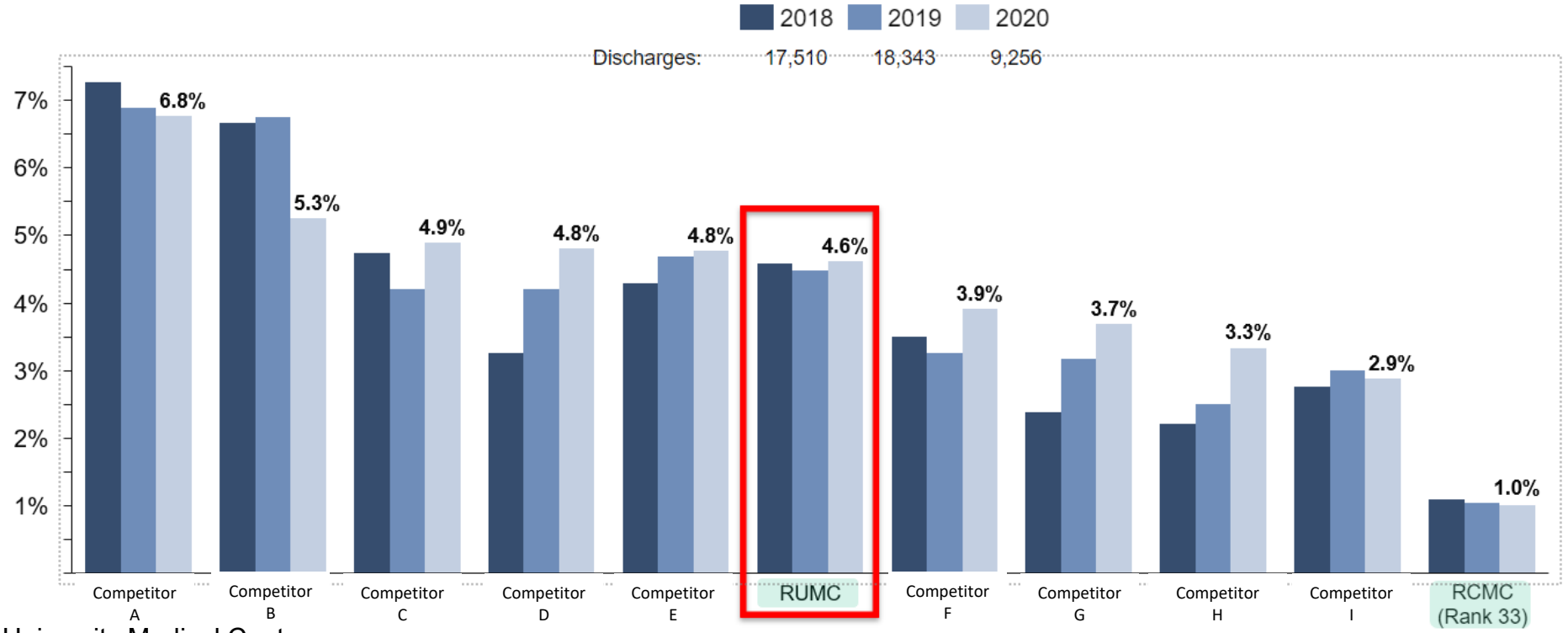
- Growing elderly population
- Improved AFib diagnostic procedures



[1]Colilla, A, Crow, A et. Al. Estimates of Current and Future Incidence and Prevalence of Atrial Fibrillation in the U.S. Adult Population. American Journal of Cardiology, 15 October, 2013. Vol. 112, Issue 8, pp. 1142-1147.

Rush Response

- Conducted a market share analysis of both inpatient and outpatient volumes in Electrophysiology Programs at large medical facilities in the Chicagoland area



RUMC = RUSH University Medical Center
RCMC = RUSH Copley Medical Center

Data source: COMP Data, Advisory board

Proposal

Develop an integrated Arrhythmia Center to provide high quality, evidenced-based, patient-centered and coordinated care and interventions for patients with arrhythmias

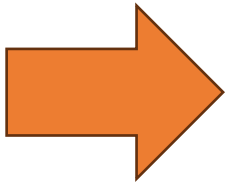
Advantage for Rush:

- Improved care coordination for patients
- Improved quality of care for complex arrhythmia patients
- System integration - provide a system approach and develop EP service allocation across sites
- Expanded clinical trial participation and enrollment
- Market differentiator
- Positive financial impact

Intervention

Data Analysis

- Outpatient volumes
- Procedural volumes
- 7-day new patient access
- Patient satisfaction
- Internal referrals
- Complication rates
- LOS index
- Mortality index
- AFib Ablation 30-day readmissions



Operational Changes

- Dedicated EP Outpatient Clinic space at RUMC
- Offsite expansion
- Additional EP lab at RUMC
- Construction of new lab at ROPH
- EP care team implementation
- Creation of disease-specific protocols

RUMC = RUSH University Medical Center
ROPH = RUSH Oak Park Hospital

EP Lab Expansion

RUMC & ROPH

- Added an additional lab at RUMC, now 3 rooms for procedures
- The new ROPH lab opened 6/19/23, one room with phased plan for expansion

Rush Oak Park EP Lab Ribbon Cutting

Clinic Expansion

- The Rush Arrhythmia Center has a dedicated clinic space at Rush University Medical Center with 4 patient rooms, nurse education, and administrative space
- Additionally, the RAC did extensive offsite expansion, with clinics now at:

Rush South Loop
(Chicago, IL)

Rush Oak Brook
(Oak Brook, IL)

Rush Oak Park Hospital
(Oak Park, IL)

Rush Munster
(Munster, IN)

Rush River North
(Chicago, IL)

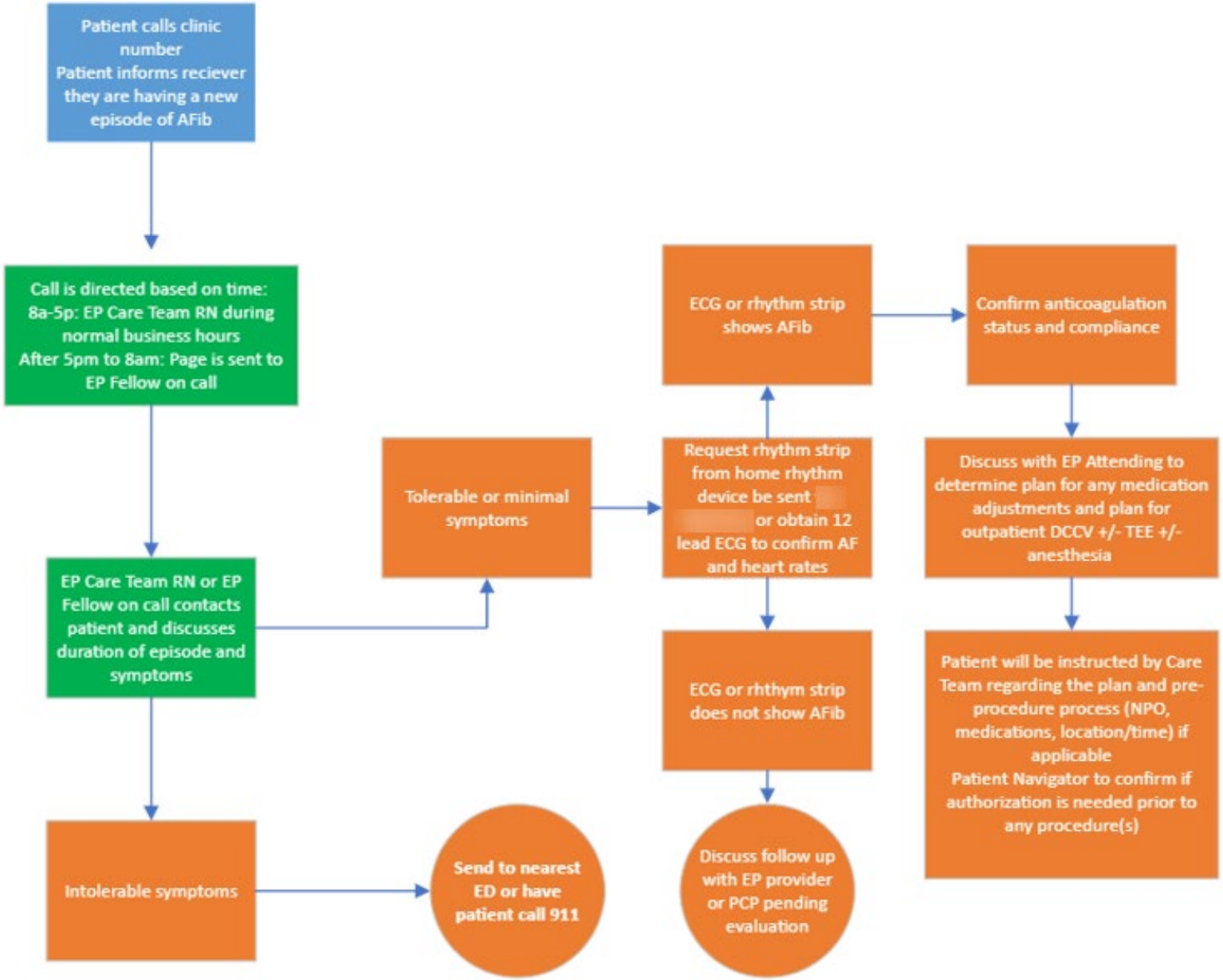
Rush Lincoln Park
(Chicago, IL)

Care Team Model

Care Team Roles & Responsibilities

- **EP Patient Navigator:**
  - Pre-authorizations
  - Completes case creation and coordination
  - Patient communication
  - Patient scheduling
  - Coordinates with inpatient team
- **EP RN:**
  - Patient education
  - Referral coordination
  - Inbox management
  - Clinic support
  - Coordinates with inpatient team
  - Managing patient calls
  - Outpatient management of patients with episodes of AFib
- **EP Clinic Coordinator**
  - Medical record collection
  - Check-in/Check-out
  - Assistance with clinic appointment scheduling, patient reminders, and no-show calls
- **Physician:**
  - Creates case
  - Initiates patient education
  - Provides timeframe recommendations
- **APP:**
  - Conducts wound check
  - Conducts routine patient follow-up visits

AFib Protocol

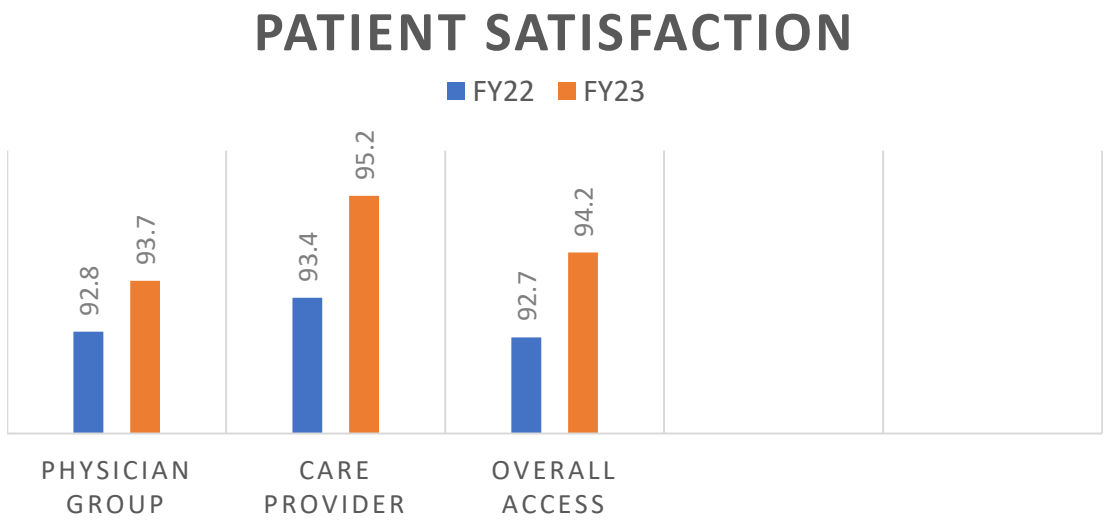


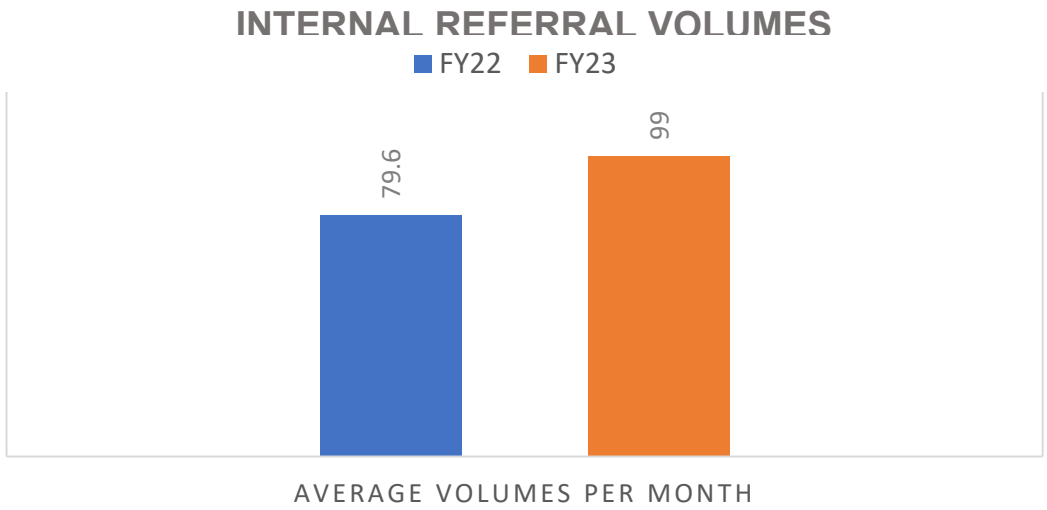
AF = Afib; DCCV = Direct current cardioversion; ECG = electrocardiogram; NPO = nil per os or nothing by mouth; TEE = transesophageal echocardiogram

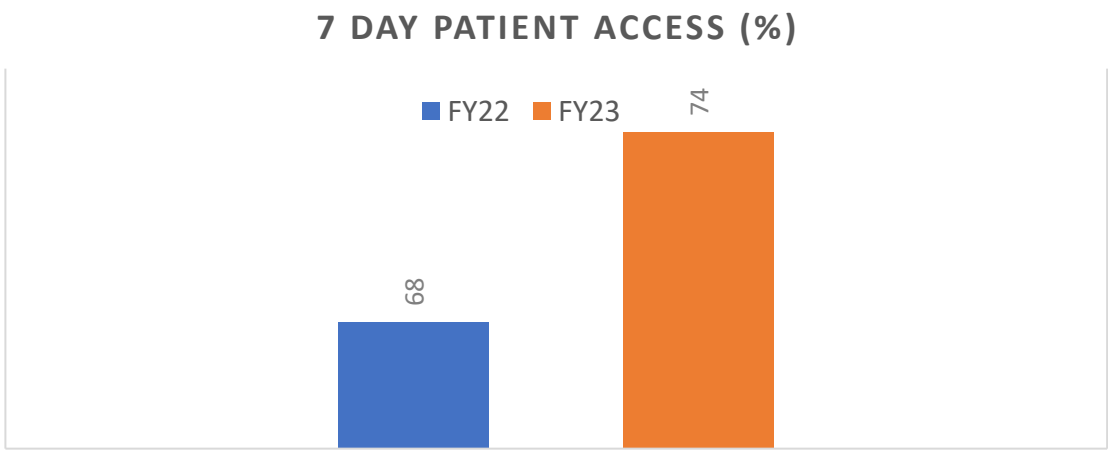
Marketing Campaign

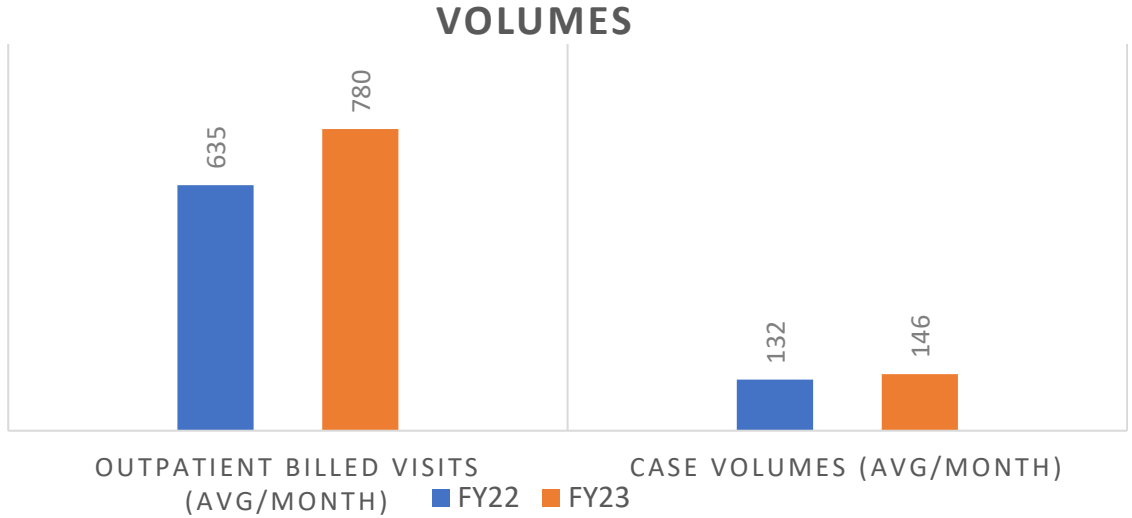
- Drove the rebranding of the program to the "Rush Arrhythmia Center"
- Key tactics:
  - Enhanced social media campaigns
  - Educational articles and videos
  - Podcasts
  - Updated website
    - Lists providers
    - Highlights innovative technologies
    - Lists clinical trials

Outcomes and Impact



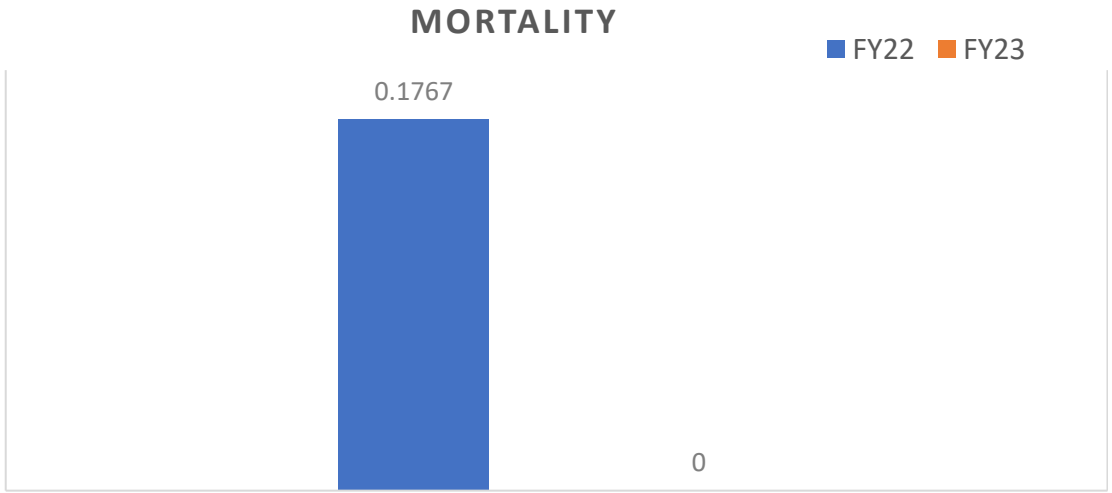


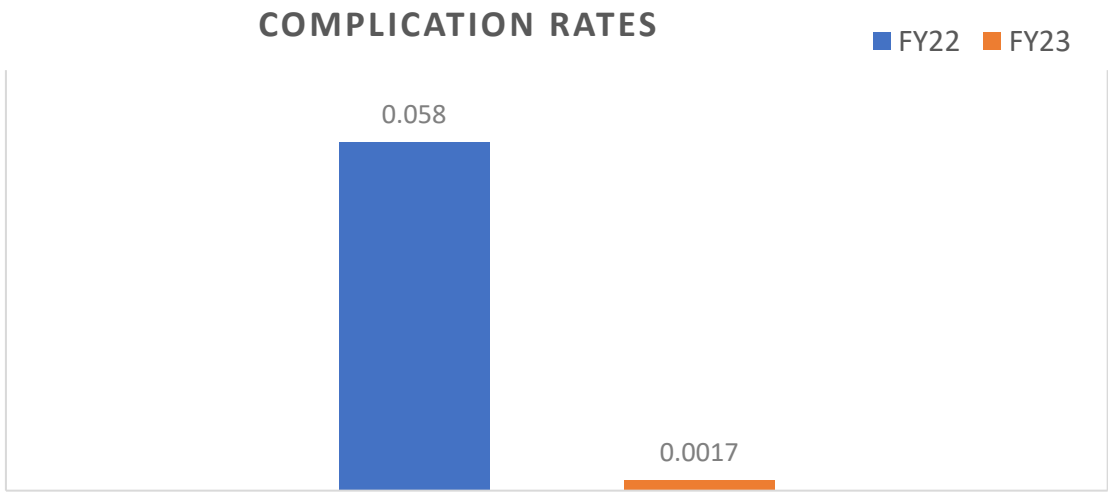


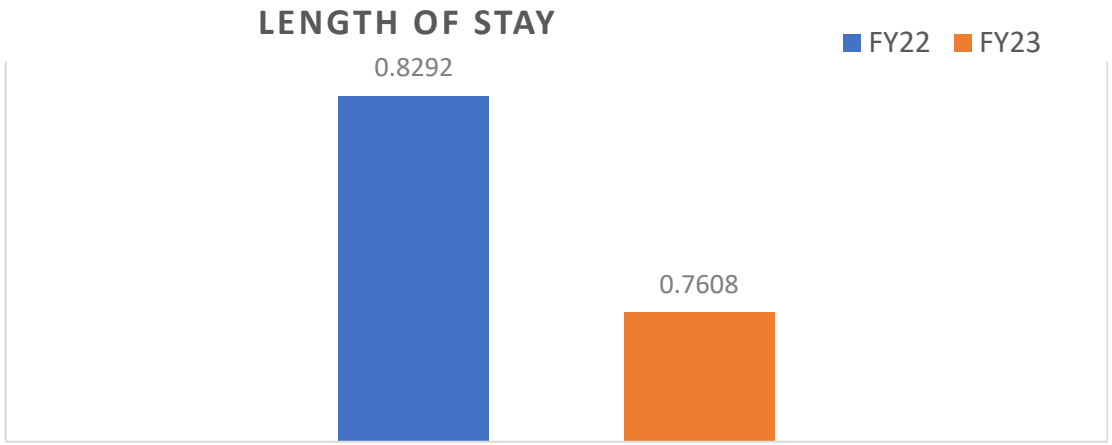


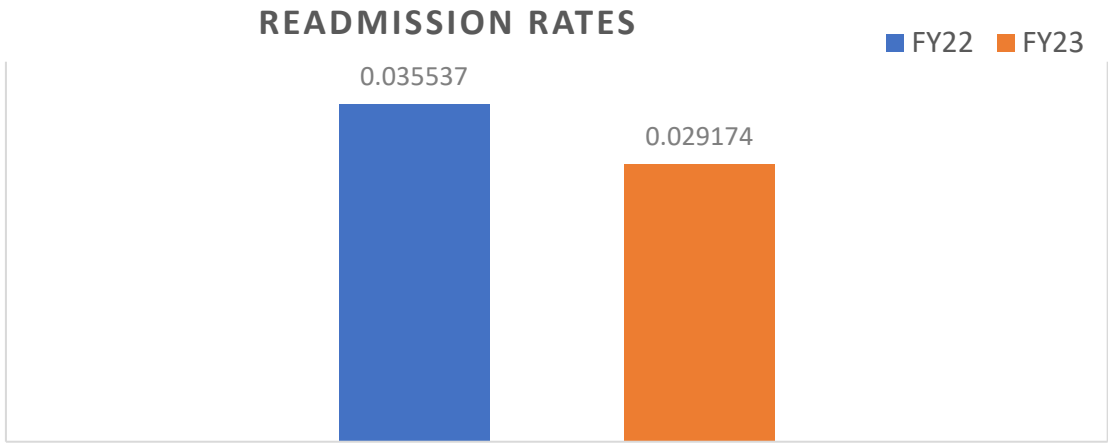
Data sources: Press Ganey (patient satisfaction); Rush University System for Health internal data (access, volumes)

Outcomes and Impact









Data sources: Vizient Clinical Data Base

Lessons Learned

- Change is hard: Bringing different teams together (lab, clinic, physicians, admin, etc.) is a process
  - Work to get early engagement and buy in
  - Resistance to change is inevitable
- See the vision, share the vision
  - Don't operate in silos, share plan with others (referring providers, larger department teams)
  - Know where people fit into the process, make sure they know that too
- Leave room to grow
  - Example: clinic space needed more rooms than anticipated

Key Takeaways

- Find people who are passionate, build your team with them
- Start with implementing in person scheduling
- Establish a realistic implementation plan, follow up/check in regularly
- Brainstorm and finalize concrete processes and workflows with respective teams
  - Be adaptable!
- Begin conversations early about upcoming changes
  - Have a plan in place to support staff through changes

Questions?

RUSH

Contact:

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Cardiovascular Service Line Executives Peer-to-Peer Meeting Facilitated Discussion

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Where are you currently resource constrained? (Select all that apply)

- Inpatient bed need
- Hospital outpatient department
- Procedure labs (catheter, electrophysiology, vascular)
- Disease-based or outpatient clinics
- Observation
- ED
- I don’t know or I am not resource constrained

Are you planning to shift some or all of your CV procedures out of the hospital in the next 12 months? (Select all that apply)

- No, that isn't in our strategic plan right now, but it might be in the future
- No, but we would like to; we have workforce constraints
- No, but we would like to; we have financial / capital / workspace challenges
- No, but we would like to; our state / local regulations make it difficult
- No, shifting procedures out of the hospital does not align with our strategy
- Yes, but beyond 12 months in the future
- Yes, we have started to shift procedural volumes out of the hospital

What is the “goal” of your service line for your organizations?

For example, “enabling appropriate clinical access”, “financial P and L for clinically related services”, “operations and efficiency”.

Where along the System of CARE, i.e. which clinical sites, are you most interested to explore?

Where along the System of CARE, i.e. which clinical sites, are you most concerned about and why?

Quality? Costs? Offices? Virtual?

Appendix question 1

How are you addressing growth opportunities?

What about gaps?

Appendix question 2

How are you growing and differentiating your Cardiovascular service capabilities?

Appendix question 3

What successes and challenges are you having with aligning physicians across your Cardiovascular service line?

What successes and challenges are you having with leveraging and aligning APPs, care navigators and nursing staff in the outpatient / clinic setting?

Appendix question 4

What is working well at your organization to manage the volume-quality relationship of high-acuity CV procedures?

What challenges persist in optimizing service distribution?


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Cardiovascular Service Line Executives Peer-to-Peer Meeting Wrap-Up

***Kate O'Shaughnessy, MS-HSM, LSSGB, CPHQ**, Senior Member Networks Director, Vizient*

Key Takeaways

- Evaluate site-of-care shift to create opportunities, understand your portfolio
- Leverage teams and shared resources for diagnosis and disease prevention
- Connect resources to grow and manage clinically collaborative programs
- Find people who are passionate, build your team with them
- Establish a realistic implementation plan, follow up/check in regularly
- Brainstorm and finalize concrete processes and workflows with respective teams. Be adaptable!
- Begin conversations early about upcoming changes. Have a plan in place to support staff through changes

What’s next

Lunch is served in Encore (location)

See you back here at 1 p.m. We’ll combine with the Cancer Service Line Executives for our afternoon programming!

Thank you

Questions?

Contact:

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