



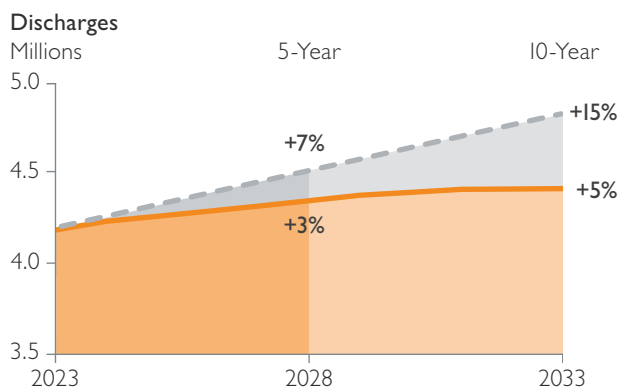
Snapshot 2023

CARDIOVASCULAR

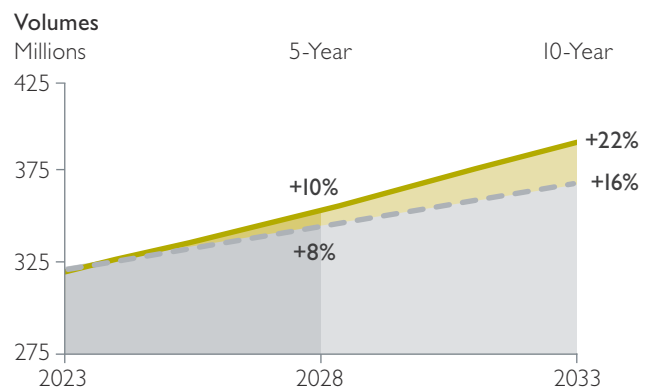
LANDSCAPE

Increasing demand is making it difficult for CV service lines to maintain access across the care continuum. Growth is fueled by not only the aging of the population but also a concerning rise in disease onset and acute events in patients younger than 45. Opportunity exists to more effectively deploy ambulatory and virtual services to ensure access, enhance disease management to improve care quality, and optimize the organization's geographic and market footprint. Physician and administrative leaders have the near-term opportunity to redesign and reenergize their CV service lines. But they now must manage increasingly complex inpatients and address health disparities within their markets. To tackle mounting operational, financial and clinical challenges, stellar channel management, data-driven care redesign and cross-disciplinary workforce models will be imperative.

Inpatient Cardiovascular Forecast, US Market, 2023–2033



Outpatient Cardiovascular Forecast, US Market, 2023–2033



■ Sg2 IP Forecast ■ Population-Based Forecast ■ Sg2 OP Forecast

TOP TRENDS

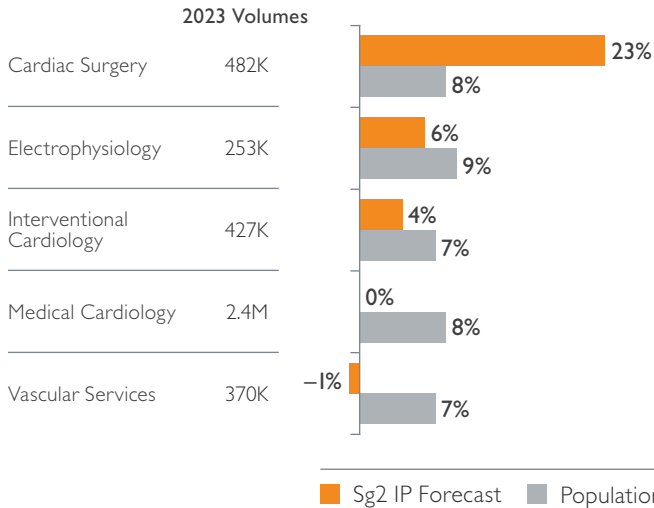
- The risk of acute cardiac events among patients hospitalized with [COVID-19 and previous cardiovascular disease is nearly quadruple that of the general population](#). This is increasing mortality rates and ICU use.
- The shift of CV procedures to ambulatory sites, such as ambulatory surgery centers and office-based labs, potentially will free up hospital capacity for high-acuity procedures, such as structural heart and complex percutaneous coronary interventions.
- Cardiac imaging technologies enabled by artificial intelligence are improving coronary plaque detection to help diagnose and manage disease.
- Updated heart failure guidelines from the ACC, AHA and HFSA in 2022 provided more [detailed, nuanced recommendations](#) for managing this complex patient population.
- In electrophysiology, multiple companies are pursuing pulse-field ablation technology, providing a new energy source for intracardiac ablation that may [reduce complications and procedure time](#).
- The CV service line is vital to bridging the gap in health equity and social determinants of health (SDOH) data, as SDOH significantly impacts those with cardiovascular disease. Programmatic development to improve prevention, access, screening, diagnosis, treatment and chronic disease management for conditions like hypertension, heart valve disease and heart failure should be prioritized for strategic focus.

Note: Analysis excludes 0–17 age group. ACC = American College of Cardiology; AF = atrial fibrillation; AHA = American Heart Association; HFSA = Heart Failure Society of America. **Sources:** Woodruff RC et al. *J Am Coll Cardiol*. 2023;81:557–569; Colvin MM. *2022 AHA/ACC/HFSA Heart Failure Guideline: Key Perspectives*. American College of Cardiology. April 1, 2022; Neale T. PULSED AF 'strengthens the case' for pulsed-field ablation in AF. *TCTMD*. March 6, 2023; 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.

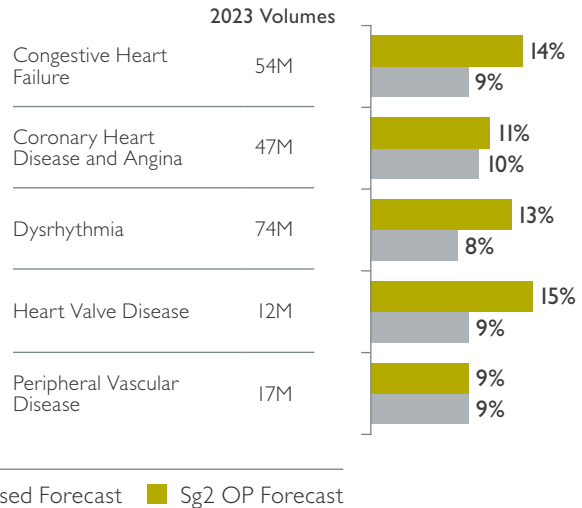


CARDIOVASCULAR SNAPSHOT 2023

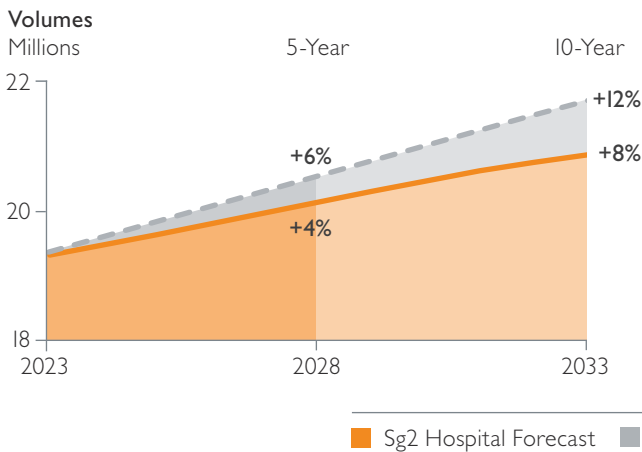
Inpatient Cardiovascular Forecast by Sub-Service Line
US Market, 2023–2028



Outpatient Cardiovascular Forecast for Select CARE Families
US Market, 2023–2028



Hospital Forecast, Cardiovascular Service Line, US Market, 2023–2033



INCLUDED IN HOSPITAL FORECAST

- IP discharges
- Visits—observation in HOPD
- HOPD procedures—major/minor
- Select diagnostics in the HOPD:
 - Diagnostic catheterization
 - CV stress test
 - Electrophysiology study
 - Implantable loop recorder

ACTION STEPS TO DRIVE VALUE

- ▶ Incorporate virtual consults and remote patient monitoring to expand local services across broader geographies, elevate care and improve patient satisfaction.
- ▶ Acquire and better integrate data to support SDOH efforts, enable risk stratification and efficiently deploy resources. Collaborate with CV physicians to advance consistent use of care protocols across all sites.
- ▶ Gain greater insight into the relationship between volumes and quality of high-acuity CV procedures to optimize service distribution.
- ▶ Formulate strategy for shifting low-acuity procedures to alternative sites of care (eg, ambulatory surgery center, office-based lab, home) based on deep insights into organization and market dynamics.
- ▶ Support multi- and cross-specialty programs (eg, cardiology, -metabolic, -obstetric) to differentiate services and improve patient management.
- ▶ Coordinate cardiac imaging services across all modalities and care sites to reduce unwarranted variation in technology and guideline adoption.

Note: Analysis excludes 0–17 age group. Inpatient sub-service line forecast is based on MS-DRG sub-service lines. Hospital forecast includes: IP discharges; visits—observation in HOPD; HOPD procedures—major/minor; and select diagnostics in the HOPD including diagnostic catheterization, CV stress testing, electrophysiology studies and implantable loop recorders. 0% indicates forecast is flat (less than ±1%). CARE = Clinical Alignment and Resource Effectiveness; HOPD = hospital outpatient department. **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.