



Snapshot 2022

CARDIOVASCULAR

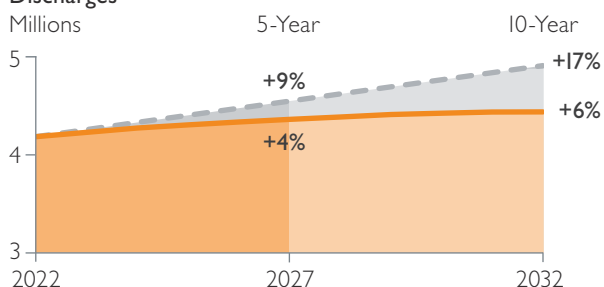
LANDSCAPE

As complexity rises, the population ages and challenges emerge due to the pandemic and increased patient acuity, hospital average length of stay and total bed days, the CV service line is experiencing steady growth. Significant outpatient opportunity continues thanks to multidisciplinary, disease-based care improving access, enhancing care coordination and mitigating some of the increased demand for hospitalizations. However, organizations are challenged by disparities in access and outcomes that the pandemic highlighted. Leaders have an opportunity to redesign and reenergize their CV service line, which now must manage not only increasingly complex inpatients but also growing numbers of same-day or next-day CV procedures in hospital outpatient departments while expanding access and delivering some elements of care in the ambulatory setting. Program success requires strategies that optimize channel management, data-driven care redesign, cross-disciplinary workforce models and virtual health technologies to address the numerous operational, financial and clinical dynamics at play.

Inpatient Cardiovascular Forecast, US Market, 2022–2032

Discharges

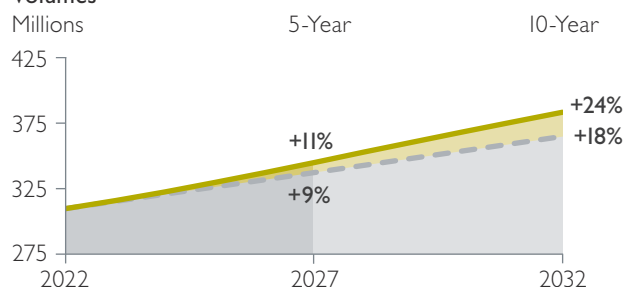
Millions



Outpatient Cardiovascular Forecast, US Market, 2022–2032

Volumes

Millions



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

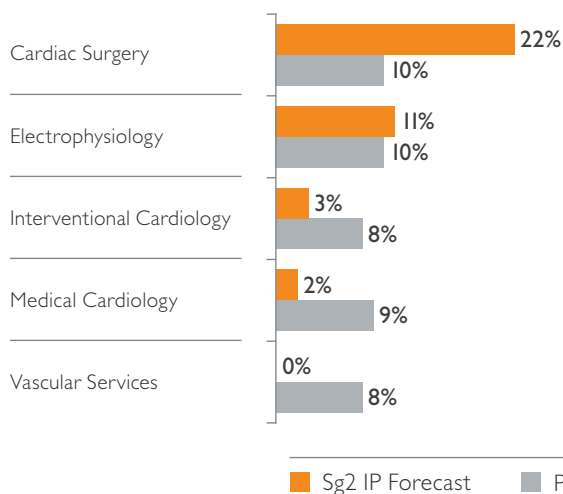
TOP TRENDS

- The CV service line will continue to play a key role in rapid triage during COVID-19 surges and in managing related current and long-term increase in cardiovascular risk and disease.
- Changes to the CMS Inpatient Only list and the ASC covered procedures list are top of mind. Single-specialty ASCs dedicated to cardiology are still at the market development phase.
- A new guideline emphasizes the importance of risk stratification, questioning additional testing for most patients with chest pain.
- New AI-enabled imaging technologies like CT-FFR continue to be developed, approved and released.
- Medication to help prevent and treat chronic diseases are impacting the CV service line. Adherence to GDMT can be an important metric for organizations moving toward value-based care.
- Clinical trials found that SGLT2i helps prevent costly heart failure hospitalizations and decrease mortality.
- A long-anticipated cholesterol-lowering drug has been FDA approved and is introducing a new model of drug delivery to the CV service line: buy and bill.
- Five-year durability data demonstrated Medtronic's TAVR CoreValve was slightly superior to surgical valve surgery, making shared decision making more important.
- Broadened efforts to address social determinants of health (SDOH), fueled in part by COVID-19, are being driven by renewed emphasis on the additive risk of SDOH on CV health as well as systems interested in having a greater impact on population health.

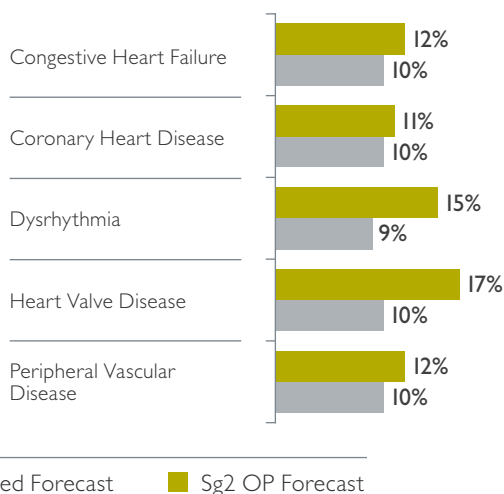
Note: Analysis excludes 0–17 age group; forecast based on MS-DRG sub–service lines. AI = artificial intelligence; ASC = ambulatory surgery center; CT-FFR = CT-derived fractional flow reserve; GDMT = guideline-directed medical treatment; SGLT2i = sodium-glucose cotransporter 2; TAVR = transcatheter aortic valve replacement. **Sources:** Impact of Change®, 2022; 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, 2019; The following 2019 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2022; Sg2 Analysis, 2022.

CARDIOVASCULAR SNAPSHOT 2022

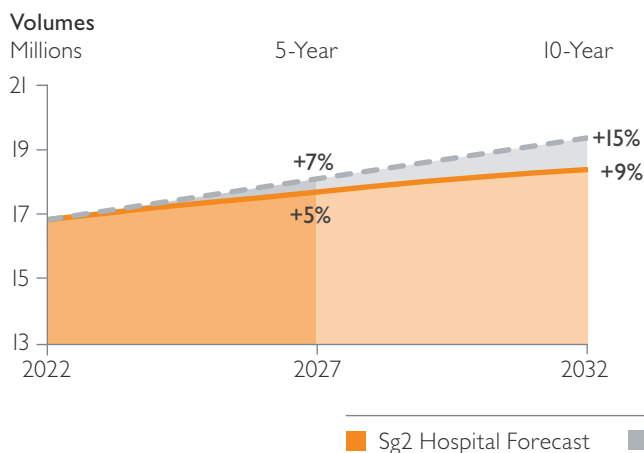
Inpatient Cardiovascular Forecast by Subservice Line
US Market, 2022–2027



Outpatient Cardiovascular Forecast for Select CARE Families
US Market, 2022–2027



Hospital Forecast, Cardiovascular Service Line, US Market, 2022–2032



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

- ▶ Elevate virtual health as a growth opportunity. With a long history of remote device monitoring, the cardiovascular service line is well positioned to further advance virtual capabilities and care delivery models.
- ▶ Enhance data acquisition, integration and utilization to support SDOH efforts and to ease risk stratification and deployment of key resources needed to efficiently deliver care. Engage CV physicians and coordinate care protocols across all sites.
- ▶ Recognize the contributions of vascular surgeons for enabling complex procedures (eg, orthopedics, trauma) beyond their traditional caseloads.
- ▶ Optimize triage and observation to ensure capacity for patients requiring high-acuity hospital resources. Use remote monitoring and virtual visits to minimize symptom exacerbations, limit the need for higher-acuity care, drive efficiencies and market differentiation, and free up a constrained workforce.
- ▶ Assess the ambulatory opportunity. CON regulations, patient risk and physician comfort must be considered before moving procedures to ASCs.
- ▶ Broaden transitional care services, such as cardiac and vascular rehab (including virtual/at-home offerings), in light of increasing payer interest and patient need.

Note: Analysis excludes 0–17 age group. CON = Certificate of Need; HOPD = hospital outpatient department. **Sources:** Impact of Change®, 2022; 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, 2019; The following 2019 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2022; Sg2 Analysis, 2022.