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Optimizing Health Care Resource Allocation, Workforce "Right-Sizing," and Stakeholder Collaboration

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Introduction

Each year at the Society for Cardiovascular Angiography & Interventions (SCAI) Annual Scientific Sessions meeting, collaborative think tanks involving interventional cardiologists, administrative partners, and members of industry are convened for each SCAI clinical practice area to discuss topics of particular interest to the group. The primary objectives of each Think Tank are to provide substantive recommendations to SCAI leadership, membership, and health care partners on critical topics relevant to each clinical practice area that may help drive meaningful change. This document presents the proceedings of the 2024 structural sessions, with an emphasis placed on anticipated workforce needs in the coming years. The Think Tank discussion centered on 4 themes: (1) adequacy of health care resources, (2) workforce "right-sizing" and resource allocation, (3) strategies for collaboration between SCAI and industry partners, and (4) identification and engagement of stakeholders (Figure 1).

Discussion

Expansion of transcatheter heart therapies

Reports from the National Cardiovascular Disease Registries have shown steadily increasing volumes of structural heart therapies, including transcatheter aortic valve replacement (TAVR), transcatheter edge-to-edge repair (TEER), transcatheter mitral valve replacement, and left atrial appendage occlusion.[1] Although the number of TAVR and TEER programs in the US has increased significantly over time, several cardiac surgical programs still lack transcatheter options. This therapeutic gap widens from aortic to mitral valve programs and soon to tricuspid valve programs. With recent commercial device approvals for percutaneous tricuspid valve therapies, the forecasted volumes for structural heart interventions are anticipated to rise further. In this context, the National Coverage Determination for TAVR (available at: https://www.cms.gov/medicare-coverage-database) was discussed in detail, and whether the prerequisites outlined by the Centers for Medicare & Medicaid Services need to be revisited—and perhaps other related National Coverage Determinations—will factor into this needs calculus.

Advanced structural heart disease training and workforce needs

Fortunately, from a workforce perspective, SCAI has played a leading role in outlining advanced fellowship training standards for structural heart disease (SHD) programs and alternative pathways for physicians who wish to acquire these clinical and procedural skill sets.[2] It appears that the workforce demands for dedicated structural interventionalists are being met. However, advanced SHD fellowships remain nonaccredited

Abbreviations: SHD, structural heart disease; TAVR, transcatheter aortic valve replacement; TEER, transcatheter edge-to-edge repair.

Keywords: Heart Team; interventional imaging; staffing; structural heart disease; think tank; transcatheter.

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by the American College of Graduate Medical Education, and their curriculum must continually evolve to include broad procedural exposure and integration of advanced imaging required in the space. Even so, it is challenging to predict how further expansion of mitral and tricuspid valve therapies as well as left atrial appendage occlusion may significantly impact this dynamic in the future. Furthermore, US health care disparities as they relate to underserved minority populations and geographical access to care highlight the continued need for well-trained procedural and imaging specialists in the field.[3] With these considerations in mind, a more detailed and forward-looking understanding of structural heart training, in relation to evolving field demands, funding, and placement, is essential to better support the multidisciplinary Heart Team and enhance patient access to care.

Investing in the multidisciplinary Heart Team

Beyond the structural interventionalist, the operational health of a structural heart program is predicated on several factors, inclusive of the entire Heart Team. These include other key team members: valve program coordinator, cardiac surgeon, interventional imager, anesthesiologist, heart failure specialist, advanced practice providers, patient navigators, catheterization laboratory nurses, and radiologic technologists. The COVID-19 pandemic resulted in challenging downstream staffing issues that impacted global health care delivery on multiple fronts.[4,5] Early retirement, an exodus from the health care sector altogether, and the transition to more lucrative traveler positions led to workforce instability, threatening the financial viability, operational capacities, and clinical capabilities of hospitals throughout the US. Given the resource-intensive nature of SHD interventions, these dynamic staffing changes unmasked an area of vulnerability that requires much-needed attention.

Staff retention should be considered a high priority moving forward. This pertains to all members of the Heart Team, from physicians to nursing staff to catheterization laboratory personnel, each of whom serves a key role in these complex procedures and the success of a SHD program. Therefore, the Think Tank group discussed "sub-specialization" of all Heart Team members—not just physicians—as one strategy for combating job transition and turnover issues that some institutions may face. Industry, in partnership with SCAI and other cardiovascular professional societies, may help provide opportunities for valve coordinators, nurses, radiologic technologists, and advanced practice providers to elevate their education and training. For example, the development of certification pathways for supporting SHD procedures may be useful to the radiologic technologist or catheterization laboratory registered nurse. Also, dedicated programming for SHD valve coordinators and advanced practice providers at the SCAI Scientific Sessions is another potential opportunity to explore. Educational growth plays an important role in team member engagement,[6] and there was enthusiasm among the Think Tank participants on how to promote this within the SHD community. Such investments may have multipronged returns, including improved job satisfaction, staff retention, and patient care.

Support for interventional imaging

From an imaging perspective, a substantial amount of discourse was devoted to defining the role of the interventional imager, as well as barriers to growth in terms of training, logistics, and incentives. As mitral TEER and transcatheter mitral valve replacement continue to mature in practice, and with transcatheter tricuspid therapies on the near horizon, the importance of the interventional imager cannot be understated. Presently, there is a mismatch in "supply and demand," where the current workforce of physicians with dedicated imaging training does not meet the growing need for advanced imaging guidance for these complicated structural procedures. Structural interventionalists should collectively advocate on behalf of their interventional imaging partners to ensure that incentives are properly aligned. Compensation for the effort needed to perform structural imaging should be higher than for imaging procedures done for other more routine indications. The utilization and need for 3D intracardiac echocardiography as an imaging modality in SHD therapies is increasing and further requires advanced training for both the interventionalist and the imager.

Additional strategies discussed to address the imaging workforce issue included raising awareness among fellowship trainees to pursue this subspecialty pathway, identifying funding pathways for advanced fellowship training programs in imaging (currently non–American College of Graduate Medical Education accredited); identifying the advanced imaging physician as a procedural cooperator; and creating opportunities for continued education of other imaging partners within cardiology and outside (eg, cardiac anesthesiology). SCAI has recognized the role and importance of the interventional echocardiographer. As such, there is now a societal membership pathway to include cardiac imagers, and their representation on leadership councils within the organization has also expanded. SCAI should collaborate closely with the

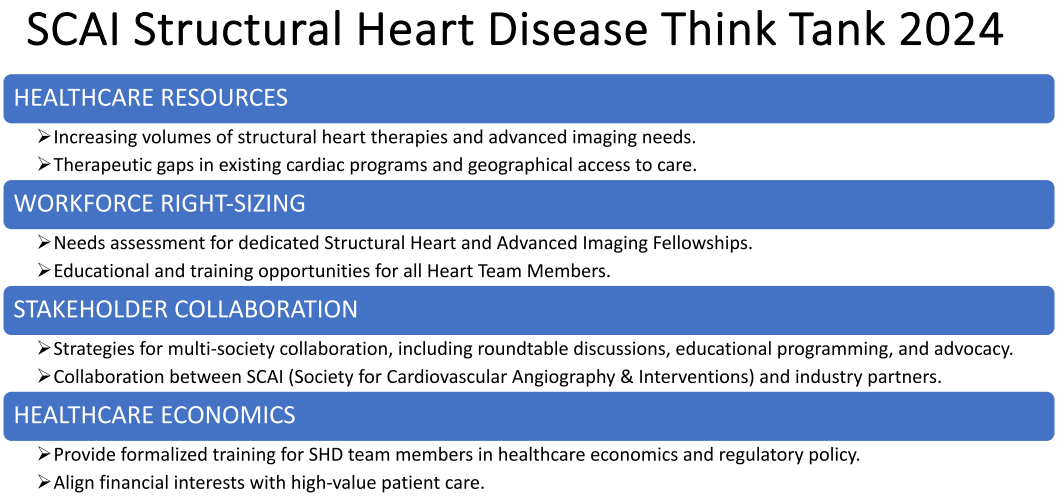

Figure 1.
An overview of the 2024 SCAI Think Tank proceedings for structural heart disease (SHD). The discussions focused on critical themes to shape future strategies and drive impactful changes.

American College of Cardiology (ACC), American Society of Echocardiography (ASE), Cardiovascular Research Foundation (CRF), Society of Cardiovascular Computed Tomography (SCCT), Society of Cardiovascular Anesthesiologists (SCA), and the Heart Valve Collaboratory to drive these initiatives forward.

Health care economics and fiscal solvency of structural heart programs

Finally, the Think Tank addressed the health care economics that underscores all SHD programs. Individual efforts to streamline these procedures (eg, 3M-TAVR Clinical Pathway), enhance operational efficiencies, and optimize cost margins can collectively help ensure the fiscal viability and growth potential of an SHD program.[7] However, the resource-intensive nature of structural heart procedures as well as other fixed and variable costs (eg, device, technical, professional) may ultimately impede the growth and dissemination of these important therapies. Fiscal responsibility is a shared duty that extends beyond the hospital and its administration. SHD physician leaders—with appropriate partnerships and support—can play a crucial role in maximizing available resources and ensuring access to care for their patients and communities. SCAI, industry partners, health care organizations, payers, and other stakeholders should partner to align financial interests, patient care, and reimbursement with the resources required to provide high-value health care. Multiple initiatives have been proposed to achieve this goal. These included the following: (1) roundtable meetings that regularly bring together important stakeholders in the SHD field, such as SCAI, ACC, CRF, ASE, SCCT, and Centers for Medicaid and Medicare Services; (2) formalized training for structural interventionalists in health care economics that provide education on cost reduction strategies, payment models, coding practices, and reimbursement; and (3) advocacy efforts to ensure that regulatory policies incentivize good clinical practice while also promoting access to care.

Conclusion

To summarize, the SCAI SHD Think Tank 2024 outlined the following directives, in the order discussed, to address issues of health resource allocation and meeting workforce demands for the future:

1. Expand educational opportunities and training platforms: Enhance educational opportunities, training platforms, and programmatic offerings for additional members of the Structural Heart Team, including physicians, program coordinators, nurses, radiologic technologists, sonographers, and advanced practice providers.
2. Advocate for dedicated interventional imagers: Promote the need for dedicated interventional imagers with advanced training and clinical experience. Develop innovative compensation strategies that reward time and expertise rather than relying solely on the "Relative Value Unit" system or adjust appropriately.
3. Align financial interests with patient care: Foster collaboration between SCAI, industry partners, health care organizations, and other relevant stakeholders to align financial and human resource requirements with the reimbursement required to provide high-value patient care. Conduct regular roundtable meetings with key stakeholders to discuss and implement strategies for cost reduction, improved payment models, and regulatory advocacy.
4. Promote health care economics education: Initiate training programs for structural interventionalists and other Heart Team members on health care economics, policy, practice management, and the financials of medicine and health care.
5. Collaborate with key societies: Strengthen partnerships with societies such as the ACC, ASE, CRF, SCCT, and SCAI to support continued education and training for imaging partners.

Peer review statement

Associate Editor Andrew M. Goldsweig had no involvement in the peer review of this article and has no access to information regarding its peer review. Full responsibility for the editorial process for this article was delegated to Editor-in-Chief Alexandra J. Lansky.

Declaration of competing interest

Katie Canpa and Mounia Haddad are employed by Boston Scientific. Mounia Haddad reports equity in Boston Scientific. Michael Church is employed by Corazon. Regina Deible is employed by Edwards Lifesciences and reports equity in Edwards Lifesciences and Abbott. Robert Ferguson is employed by Medtronic. Liz Maguire is employed by Abbott and reports equity in Abbott. Devin Nelson is employed by Gore & Associates. Jennifer Shetler and Nusrath Sultana are employed by Cordis. The other authors have nothing relevant to disclose.

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Ethics statement and patient consent

This article does not report on patients or patient data. Ethical approval and patient consent were not required.

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