

VIEWPOINT

VOICES IN CARDIOLOGY

Sports Cardiology



The Transition of Fellow-in-Training to Early Career Physician

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Why sports cardiology? Over the past 2 decades, sports cardiology (SC) has evolved from a small niche interest into a distinct career opportunity. As the field has developed, so have opportunities across the cardiology subspecialty spectrum and within university medical centers, private practices, and integrated health care systems. Major professional societies, including the American College of Cardiology (ACC) and the European Society of Cardiology, have formed subsections dedicated to the field, which have seen exponential growth in membership and participation. These efforts have led to focused conferences and increased collaboration in this rapidly evolving field.

The ACC has previously published an introduction and a 3-part series on major topics currently within SC.^{1,2} Herein we will augment these articles by exploring pathways for fellows-in-training (FIT) to successfully navigate the transition to early career (EC) as a sports cardiologist, including developing relationships with mentors, determining training program structure, and discussing unique aspects of professional planning. A major aspect advocated to interested FIT/EC is the need to become a cardiologist first, and then cultivate a niche in SC. This piece

combines insights from 3 ECs (M.H., K.K., M.C.) who are currently navigating this transition with the assistance of the 3 recent chairs of the ACC sports and exercise section (M.E., M.M., E.C.).

MENTORSHIP AND TRAINING

Inasmuch as many institutions do not have sports cardiologists and there is no Accreditation Council for Graduate Medical Education accredited fellowship, it is imperative for FITs to find mentors to help guide training and self-directed learning (**Figure 1**). The absence of core cardiology training statement requirements and board certification has led to various proposed pathways to the development of competence in SC.¹ A framework for a core curriculum, outlined by the ACC Sports and Exercise Leadership Council, provides a blueprint for appropriate resources and learning opportunities.³ This document importantly outlines the foundation of education for a career in SC to augment mentorship and training.

Quality mentors can provide guidance on ways to successfully obtain training in SC and build it into a practice. Away rotations can be essential to an aspiring sports cardiologist's repertoire, providing opportunities to obtain clinical exposure and build relationships. Furthermore, this time can be instrumental in learning how to incorporate specific interests within SC, be it cardiopulmonary stress testing, cardiomyopathies, channelopathies, cardiac rehabilitation, advanced imaging, or any other component of SC. To assist interested FITs, the ACC Sports and Exercise Cardiology section has created a database that includes active SC programs. Reaching out to these established faculty and programs about experiences and potential away rotations can be the first step in developing meaningful relationships. Furthermore, this database lists FIT/ECs who have previously completed rotations and other exposures

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the [Author Center](#).

within SC, allowing FITs the opportunity to learn from their experiences and emulate training structures to fit their own career goals.

THE SPORTS CARDIOLOGY COMMUNITY

The specialty’s unique ability to draw a wide spectrum of patients highlights the demand for and the rewards from caring for athletes and highly active individuals. Patients can be generally categorized on the basis of age (eg, high school, collegiate, post-collegiate, or masters), level of competition (eg, recreational, competitive), and presence of cardiovascular disease (eg, unknown or known). Some might require 1 or 2 visits to provide reassurance (eg, review of testing and interpretations), whereas others might require close follow-up for management and workup (eg, determination of return to play after a myocardial infarction). Depending on the clinical presentation, care of the athlete usually benefits from a multidisciplinary approach and comanagement with the other members of the patient’s health care team. Involvement of all stakeholders, starting with the patient and his/her support and health care teams, is central to shared decision making when challenging clinical scenarios are addressed.

The rapidly rising interest in SC has facilitated dedicated meetings, such as the ACC Care of the

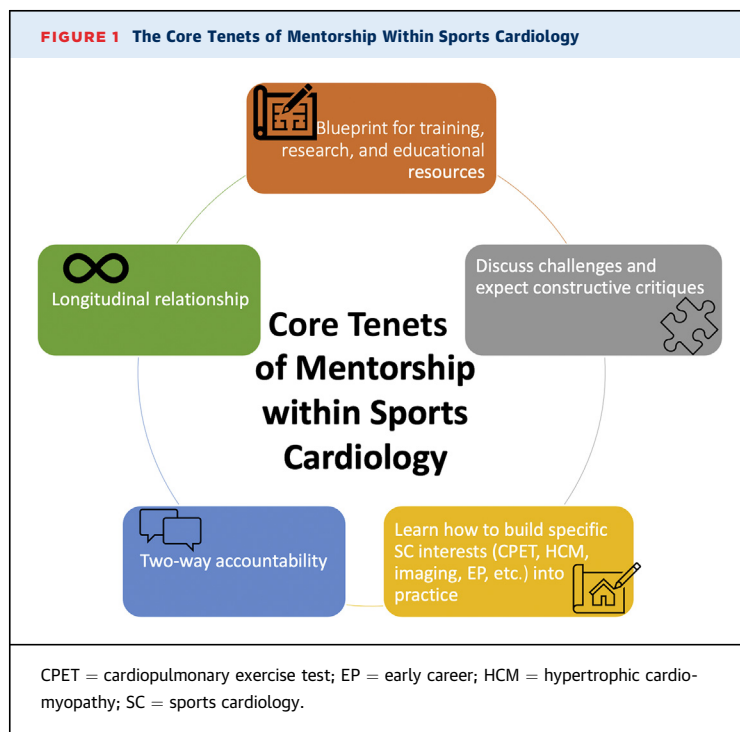
Athletic Heart meeting and also state chapter meetings in California, New Jersey, and Pennsylvania, to name a few. These live meetings occur in addition to focused sessions held at the European Society of Cardiology, ACC, and American Heart Association annual scientific sessions. These intimate venues are excellent opportunities to establish and maintain relationships, present scholarly activity, participate in expert panel discussions, and have an immersive experience as a sports cardiologist.

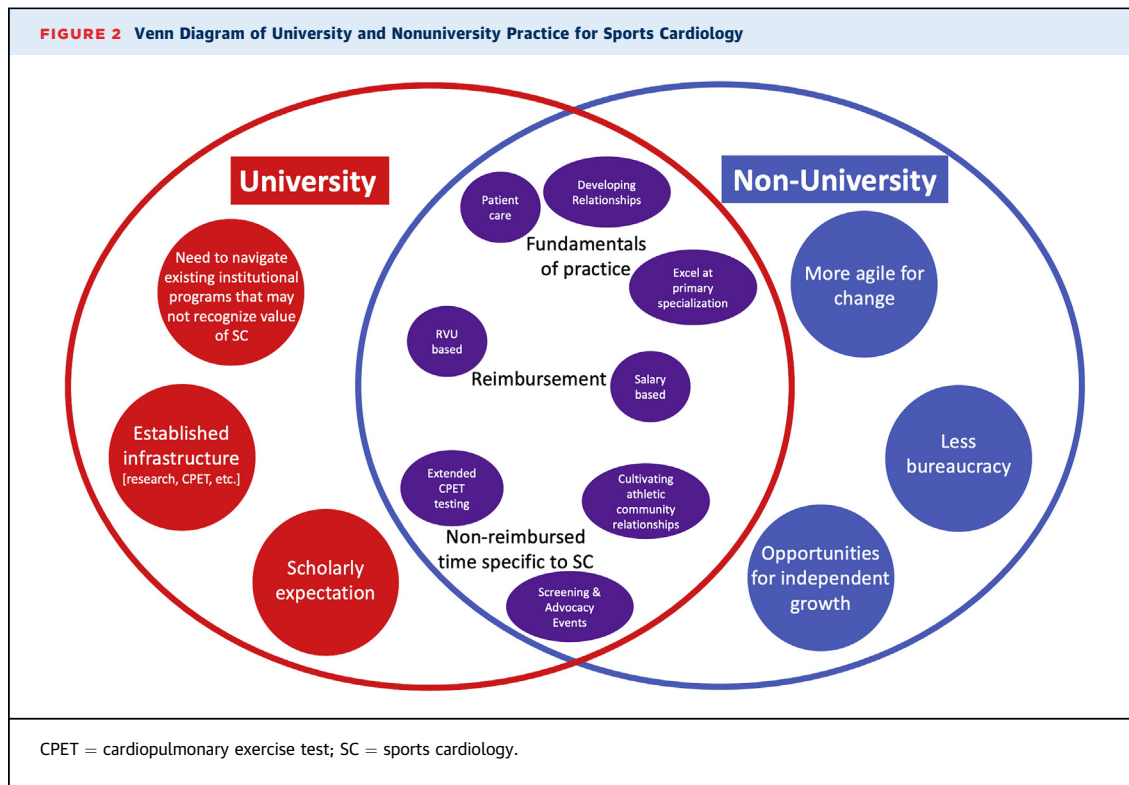
The ACC Sports and Exercise Cardiology section has developed a robust community of FIT/ECs to facilitate collaborative learning. In addition to using landmark manuscripts and texts on SC,^{4,5} the aspiring sports cardiologist has access to a variety of online learning modalities curated by the SC community. Recent section members have championed expert commentaries, updates from major studies and meetings, and clinical cases on ACC.org. Furthermore, there is an active social media presence on Twitter (#SportsCardio) and ACC Member Hub.

HOW DO YOU FIND A JOB THAT INCORPORATES SPORTS CARDIOLOGY?

To our knowledge, there has not yet been a formal needs assessment in SC, and that should be a focus for future study. Presently, owing to growing interest in and recognition of SC, more institutions are recruiting cardiologists who have an interest in and knowledge of SC. Nevertheless, FITs should consider many factors when choosing the appropriate clinical environment after fellowship. Much like the recent development of subspecialists in adult congenital heart disease, postfellowship career paths often begin at large university institutions that serve as regional referral centers; however, private practice and hybrid positions have proved to be viable career options for SC as the distinction has become more blurred (Figure 2).

In academics, the established infrastructure can help facilitate research and leverage existing resources, such as cardiopulmonary exercise test equipment, to provide the foundation for an SC program. The FIT should consider that employment with a university may come with the expectation of increased scholarly activity and the possible need to navigate existing institutional programs, such as cardiac rehabilitation or a hypertrophic cardiomyopathy center, that may or may not yet recognize the potential utility of SC. However, the traditional paradigm that scholarly research is an expectation may not be a requirement and will be contingent on





the collaborative goals of aspiring FITs and their future institution.

Elements of the private practice dynamic, including varied clinical structures, differences in reimbursement or relative value unit production, and marketability, create the potential for a different practice paradigm for the graduating fellow interested in SC. FITs should discuss these aspects with practice groups ahead of time to ensure that their goals align. The need for these discussions should not deter interested FITs, given that many established sports cardiologists practice in nonuniversity environments. Indeed, there are professional and collegiate sports teams around the country aligned with private groups and/or hospital systems that are not university based. Hence, the wide variety of practice contexts highlights the need for mentorship and exposure to the field as the aspiring sports cardiologist approaches his or her first job after fellowship.

Aside from design, the fundamentals of practice will largely remain similar between traditional university and nonuniversity programs. Practices should work to support aspiring sports cardiologists' goals for developing their programs, key relationships, and referral patterns; screening or advocacy events; and dedicated cardiopulmonary testing. The sports cardiologist will be able to bring a diverse skill set to

any practice environment while working within a multidisciplinary collaboration.¹ Given that SCs are unlikely to make up a majority of their practices, the FIT/EC should continually strive for excellence in the chosen primary cardiology specialization. The growing demand for and interest by the cardiovascular community, and by patients seeking care, will continue to lead to opportunities for sports cardiologists to market their value.

TRANSITION TO EARLY CAREER

The transition to become an EC physician can be daunting in any specialty, and SC is no different. As our mentors in SC have emphasized, the 3 core tenets to becoming a successful sports cardiologist are availability, affability, and ability. In other words, the aspiring FIT should be well trained, have excellent interpersonal skills, and be ready to see patients whenever the need arises. An emphasis should be placed on maintaining readily available pathways for timely evaluation, diagnosis, and treatment of conditions experienced by the patient-athlete.

There are multiple avenues that sports cardiologists can use to create a strong referral base for their clinical practice. Developing and maintaining a strong relationship with sports medicine and athletic departments are paramount to establishing expertise

and local recognition. The aspiring sports cardiologist should also consider participating in community outreach, screening events, sport and physical activity advocacy, speaking to athletic groups or at athletic events and other community events.

Last, given that SC is a relatively young cardiac subspecialty with a limited but growing evidence-based practice, it is imperative that the aspiring sports cardiologist remain an avid lifelong learner and an active participant within societies (such as the ACC Sports and Exercise Cardiology section) and SC-specific meetings. Furthermore, it is important to maintain close relationships with mentors and colleagues as new data emerge, fostering a communal approach to treating patient-athletes with the appropriate standard of care. The increasing numbers of FITs choosing to pursue a career focusing on SC may improve research, collaboration, and best practices, thus helping propel the subspecialty forward via improved evidence-based recommendations and more informed use of shared-decision making models.

CONCLUSION

Despite limited formal training and practice locations, SC is a rapidly expanding field with strong relationships to foster new trainees. As awareness of the field increases, graduating FITs will have plenty of opportunities to grow into their EC roles and will have the community base to support whatever endeavor they choose.

FUNDING SUPPORT AND AUTHOR DISCLOSURES

The authors have reported that they have no relationships relevant to the contents of this paper to disclose.

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KEY WORDS athletic heart, congenital heart disease, cardiopulmonary exercise test, early career, fellows-in-training, sports cardiology