JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY
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PUBLISHED BY ELSEVIER INC.

VOL. 65, NO. 19, 2015
ISSN 0735-1097/$36.00
http://dx.doi.org/10.1016/j.jacc.2015.03.556

EDITORIAL COMMENT

The Changing Face of Team Care, and a Challenge for the Future*

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The practice of cardiology has 1 constant, and that is continuous change. One of the most remarkable changes in recent years has been a rapid transition from cardiac care provided by an individual cardiologist to care provided by a team. Teams are formed because of the need to involve individuals with different ideas, skills, and resources in the solution of complex problems. There is almost no activity relevant to the care of the modern cardiac patient that is performed outside of a team context. Arrival at the emergency department of a patient with ST-segment elevation myocardial infarction mobilizes a carefully-synchronized and highly-skilled group that rapidly and safely provides reperfusion therapy to the patient. Referral of an 89-year-old patient with symptomatic aortic stenosis to a center equipped to place aortic valves by a transcatheter approach brings together a group including surgeons, interventional cardiologists, anesthesiologists, and cardiac imaging experts to decide the proper approach to valve replacement. Anticoagulation clinics and heart failure management have long benefited from the involvement of multiple disciplines. The care of patients with coronary artery disease has been enhanced for decades by multidisciplinary cardiac rehabilitation teams. Cardiologists are hard-pressed to identify many aspects of patient care that they can provide completely without input from others.

Our own guidelines already recommend team care in much of what we do. The American College of Cardiology (ACC) published 5 guidelines in 2014 (1-5). Those recent documents mention team care 60 times, with 8 different types of teams cited (**Table 1**). Team care is no longer a vague concept, but is a daily reality. Then ACC President Ralph Brindis teamed with George Rodgers and Eileen Handberg to address the concept in a *JACC* President's Page in 2011 (6). In 2013, the Clinical Quality Committee of the ACC recognized the need for a health policy statement (HPS) on the subject that would state the ACC's position on team-based care and challenge the health care system and policy makers to adapt. The Board of Trustees of the ACC took special interest in the project, and their leadership, together with a multistakeholder think tank in 2014, resulted in the first HPS on team care of the cardiac patient that is being published in this issue of the *Journal* (7).

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The need for effective and efficient cardiac care teams brings new challenges to the ACC, some that will be solved within the cardiac team itself, but many that will call for incremental cultural, institutional, and societal changes. The HPS by Brush et al. (7) takes a first step in the journey toward articulating the ACC's vision of optimal use of team care, outlining the training, qualifications, and roles of some core team members that comprise our current teams. It identifies barriers to dissemination of team care and presents examples of effective team-based care. But there is much more to be done.

SCIENCE AND QUALITY

Advancing knowledge and improving care will require data. Our current methods of measurement attribute clinical activities to an individual (often via claims data) rather than a team. The National Provider Identification (NPI) system has institutionalized the concept of 1 provider, 1 charge for services. In

*Editorials published in the *Journal of the American College of Cardiology* reflect the views of the authors and do not necessarily represent the views of *JACC* or the American College of Cardiology.

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TABLE 1 Teams Identified in 2014 Guidelines

Perioperative team
Surgical/procedure team
Cardiovascular implantable electronic device team
Outpatient team
Heart team
Health care team
Heart valve team
Multidisciplinary team

the absence of alternatives, claims data based on NPI serve as surrogates for clinical activity that is increasingly dependent on teams. Current data platforms, including electronic medical records, data registries, and even case report forms for clinical trials have been designed around individual providers, rather than teams.

More research is needed on what constitutes the best in team care. We are just beginning to learn not only what elements are needed on teams, but also the elements that may not improve performance. The group at Yale has shown that top-performing teams caring for patients with acute myocardial infarction include pharmacists, but cross-training intensive care unit nurses to work in the cardiac catheterization laboratory is not associated with high performance (8). The evidence from multidisciplinary heart failure teams led to a policy statement from the Heart Failure Society of America supporting the inclusion of a clinical pharmacist as a member of the multidisciplinary heart failure team (9). Composition and expertise of the valve team are defined in ACC guidelines (3). Those same guidelines do not show us how to assess the quality of the valve team's performance. The composition, quality measurement, and performance benchmarks for all care teams need clarification on the basis of evidence.

EDUCATION

The ACC is a leader in professional education and has identified meaningful education as a core activity in the College's new strategic plan (10). The education of teams is fundamentally different from the education of individual professionals. The published data are scant regarding cardiovascular team education, but training together and simulation training may be tools used more frequently in the future (9). Equivalent to the NPI mechanism for tracking clinical activity, the mechanisms for tracking continuing medical education and maintenance of certification are designed to evaluate the individual, not the team. The lack of robust data identifying the education and competence of the team will need to be remedied if we are to identify and benchmark the best practices for educating the team. The medical profession may increasingly draw on techniques developed in industry, the military, or even sports organizations to train high-performing teams.

ADVOCACY

Brush et al. (7) outline some of the obstacles to team care. Issues of licensure, credentialing, and reimbursement remain. Some of the obstacles to team care are global, but others are a result of local issues, care models, and regulation. Advocacy is, by its very nature, a multilayered effort and responds to a continuously changing landscape.

The profession must anticipate that the addition of new team members will be a continuous process. For example, genetic testing for suspected congenital long QT syndrome receives a Class I recommendation based on expert consensus (11). A critical component of genetic testing is the provision for genetic counseling; this is a skill not generally possessed by cardiologists, but specific to trained genetic counselors. These genetic counselors are now the newest members of the ACC, and are eligible, after meeting ACC membership standards, to become associate members of the ACC, like our advanced practice colleagues. The genetic counselor's role in the care team needs further definition. As with all new team members, the aspiration will be for these professionals to have the opportunity to practice at an optimal level on the basis of the ideas, skills, and resources that they bring to the team.

The process of advocacy is not swift, and if team care is to thrive in the future, our professional society needs to advocate for new members of the team in a steady and coordinated fashion.

INNOVATION

There are teams yet to be invented, processes to be defined, and clinical trials to be performed. Forward-thinking institutions are embedding innovation centers into their health care system (12), and the best innovations still must be implemented, a field driven by science as well (13). Even the science of team size, structure, and connectivity needs exploration in the context of heart care (14). Cardiac care teams will need access to information about these innovations so that the best team care can be efficiently and rapidly disseminated.

The advancement of team care will require visionary leaders who can see the opportunities of the future. The ACC will need more discussion, reflection, and policy development on the many important and

evolving aspects of team-based care. New ideas will be brought forward to be vetted. The skills needed to care for future cardiac patients will change. New resources will be required for patient care, and some old resources may need to be discarded. The knowledge, skills, and resources may come from team members that have not even been identified yet. Change will occur rapidly. The first ACC HPS on team-based cardiovascular care should stimulate a revolution in the way we think of cardiac care, how we develop and validate team care methods, and how we disseminate knowledge of best practices. The ACC has established itself as a trusted force in the transformation of cardiac care—care that now is a team sport.

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KEY WORDS ACC health policy statement, cardiovascular team-based care