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Heart teams inch into routine cardiac practice

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The heart team has drawn fans since the franchise first took the field about 3 years ago, but how has it fared in the standings?

It may be hard to believe, given how quickly the heart team concept wormed its way into the cardiac mindset and lexicon, that the term seems to have been first coined in August 2010, when the most recent edition of the myocardial revascularization guidelines of the European Society of Cardiology was unveiled at the society's annual meeting and then published 2 months later.

The ESC revascularization guidelines (Euro. Heart J. 2010;31:2501-55), as well as authors who have written about heart teams since then, credited the name to investigators from the Synergy Between PCI With Taxus and Cardiac Surgery (SYNTAX) trial, the group that formalized the idea of an interventional cardiologist and cardiac surgeon closely collaborating in assessing and managing patients with complex coronary artery disease who need revascularization.

The heart team approach received further support a year later, when the 2011 revascularization guidelines for percutaneous coronary intervention (Circulation 2011;124:2574-2609) and for coronary artery bypass surgery (Circulation 2011;124: 2610-42) of the American College of Cardiology, the American Heart Association, surgical societies such as the Society for Thoracic Surgery (STS), and several other groups repeated what the ESC had said and tapped heart teams – a joint consult between an interventional cardiologist and a heart surgeon – as the basic decision maker for the management of unprotected left main or complex coronary artery disease. Both the 2011 PCI and coronary artery bypass graft (CABG) guidelines said that "a heart team approach to revascularization is recommended" for these advanced-disease patients, a class I recommendation.

Further buttressing the role of heart teams, as well as muddying the waters on exactly which physicians and surgeons belong on a heart team, has been their growing role in managing other cardiac disorders, most notably for transcatheter aortic valve replacement (TAVR). Last May, the Centers for Medicare and Medicaid Services solidified the link when it ruled that it would pay for TAVR in Medicare beneficiaries only if a heart team was involved from the start. As a result, heart teams are now more tightly and consistently entwined with TAVR than they are with revascularization, where the use of a heart team tracks closely with the increased complexity of a patient's coronary disease.

Broadening use of heart teams also makes them a little harder to define, as the interventionalist and

surgeon collaboration on TAVR involves different jobs and different players than does coronary revascularization. The role heart teams play in early 2013 for U.S. revascularization of coronary disease remains a bit fuzzy. Every interventional cardiologist and cardiac surgeon have their sense of how they use heart teams and how other physicians and surgeons at their hospitals use them for revascularization cases, but a global accounting of the extent to which the heart team concept has penetrated American practice is totally lacking, and will likely stay that way.

Revascularization heart teams remain poorly defined

"The notion of encouraging multidisciplinary care in cardiovascular medicine, exemplified by the heart team concept has gained increasing traction" for revascularization, TAVR, and other complex endovascular interventions, Dr. Brahmajee K. Nallamothu and Dr. David J. Cohen wrote in a perspective article last year (Circulation Cardiovasc. Qual. Outcomes 2012;5:410-3). Examples of that traction include adding heart teams to guidelines, and sessions that focus on heart teams at meetings, Dr. Nallamothu said in an interview.

Dr. Brahamajee Nallamothu

But thinking of heart teams as formal entities for coronary disease, as formal as for TAVR, is tricky. "The heart team concept always sounds like a great idea, but the real gap has been in showing people in real-world practice how they can apply the idea of a heart team to front-line decision making about patients undergoing revascularization," said Dr. Nallamothu, an interventional cardiologist at the University of Michigan in Ann Arbor. "We have not shown hospitals and physicians how to do this in a practical way. We need more discussions by multidisciplinary teams about complex patients." Heart

teams "have filtered into our guidelines without showing doctors how you do it practically, and even if you can, how do you pay people for doing it?" he said.

But most heart surgeons and cardiologists will tell you that what they typically see "is not a lot of formal heart teams, but a lot of discussions, and that's only been strengthened as TAVR and other structural heart disease programs have started to be team based," Dr. Nallamothu said.

Informal discussions between cardiologists and surgeons about revascularization cases have, of course, gone on for years, and most seem comfortable with it staying that way.

"In community hospitals, patients without complex CAD [coronary artery disease] do not routinely have cardiac surgery consultations. The traditional model is that when a patient needs surgery, the cardiologist consults a surgeon," said Dr. David C. May, an interventional cardiologist in Coppell, Tex.

"Ad hoc or provisional stenting remains the norm in about half the cases. It's important to separate the complex and simple cases. Most ad hoc PCI is not done in complex cases. Complex cases are done as scheduled, planned procedures," Dr. May said in an interview.

"In the real world, cardiologists see surgeons all the time, every day. We interact all the time. Collegial discussions about patients are always on the table. Most of these consultations are off the cuff and not official," agreed Dr. Peter C. Block, an interventional cardiologist at Emory University in Atlanta.

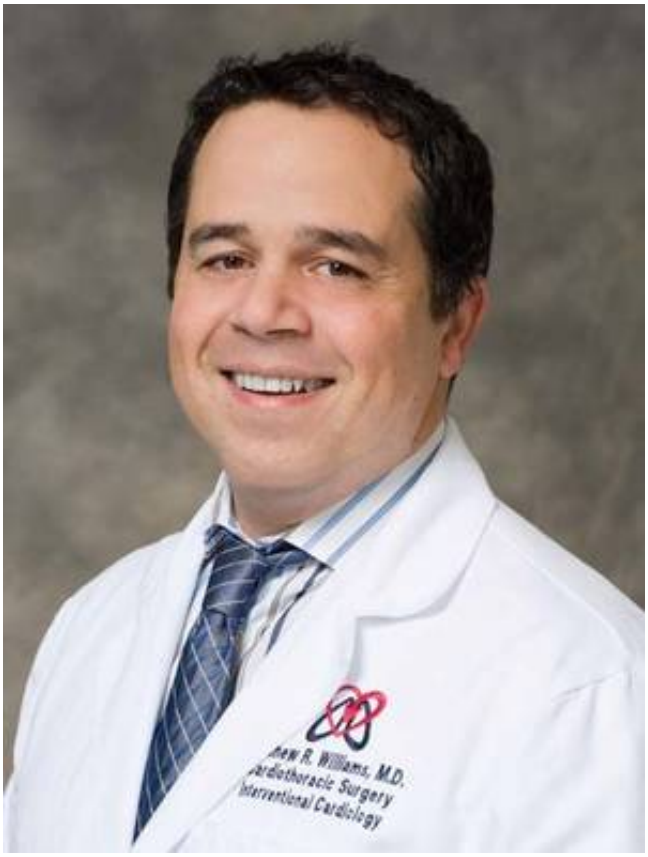
"If a patient is clearly a PCI candidate, with a SYNTAX score of 15 and no diabetes, I will do PCI" without a surgical consult. "If the patient has a SYNTAX score of 28 or 30 and I think he is not a good patient for PCI, I'll discuss it with my surgical colleagues. If we agree, I'll either do the PCI or pass off the patient for surgery. It would be very difficult to get a surgical consult for every U.S. patient who gets PCI," Dr. Block said.

Waiting for "the pause"

But is this approach to heart team use consistent with existing guidelines, and do cardiologists usually make the right call on when they should seek a surgical consult? A critical part is what some people call "the pause," or "taking a patient off the table." An interventional cardiologist can either perform a coronary catheterization for diagnostic purposes only, obtain the patient's coronary angiogram, and then halt the catheterization procedure while the angiogram films are reviewed by the cardiologist and surgeon, or the cardiologist can elect to continue on after angiography and proceed directly to PCI.

"Many cardiologists don't believe a pause is necessary. If you ask most U.S. cardiologists, they will tell you that they are comfortable making the decision to stent on their own, that they don't need a surgeon engaged in the conversation," said heart surgeon Timothy J. Gardner, medical director of the center for heart and vascular health at Christiana Care Health System in Wilmington, Del. "They don't want to delay the stenting to another catheterization if they believe that patient needs PCI."

But at least one cardiac surgeon believes that postangiogram pauses are on the rise.



Dr. Matthew Williams

"We are definitely seeing a pause after angiography a lot more," said Dr. Mathew R. Williams, a cardiac surgeon and interventional cardiologist and codirector of the heart valve center at Columbia University in New York. "Rather than doing PCI at the time of diagnostic cath, patients are coming off the table, even when we feel the patient should have PCI. Not every case, but patients are coming off the table and that discussion is occurring for patients with complex disease, with left main and LAD [left anterior descending] involvement," Dr. Williams said.

Paying for the consult

Reimbursement is another potential challenge to the viability of surgical consults for revascularization patients.

"It’s a challenge to get people in a busy community practice together as a heart team. They are their own business entity. How do you create a heart team across these business entities?" asked Dr. Thoralf M. Sundt III, chief of cardiac surgery at Massachusetts General Hospital in Boston. "My view of community practice is limited, but I think it’s a real challenge for most community practices to do it. People agree with the heart team concept in theory, but executing it in communities will be a huge challenge."

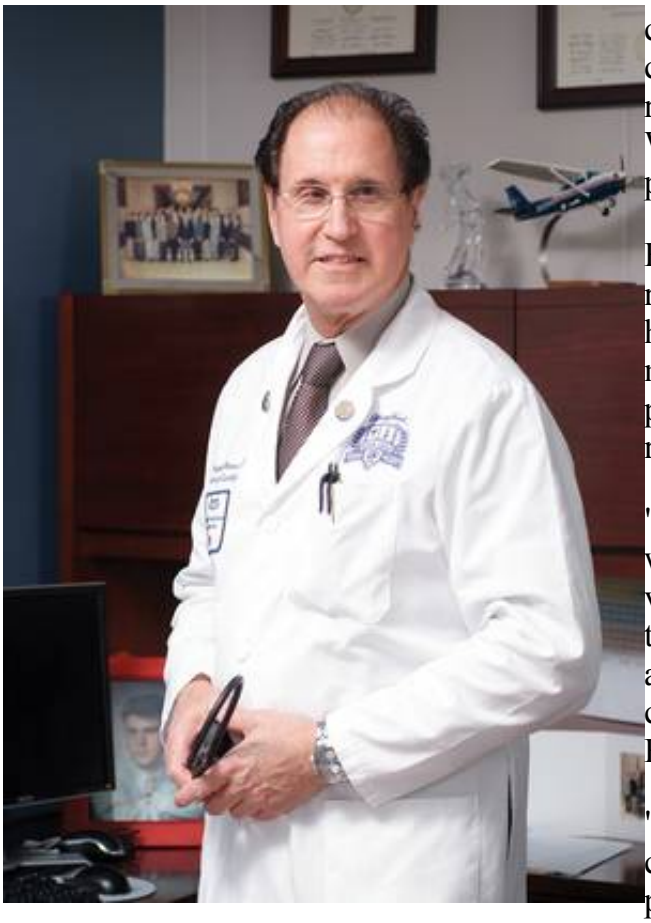
Dr. Nallamothu of the University of Michigan said, "I’m at an academic center, and for the most part we are salaried. A lot of the heart team discussions are built into our academic responsibilities. For heart teams to really take off in the community, we need to understand how we are going to do it. You need a mechanism to value the work of evaluating cases and rendering opinions about treatment. You can’t

expect physicians to do that pro bono. I think it will be a disincentive for full engagement and cooperation unless you can figure out" how to compensate physicians for just rendering their opinions.

"Community hospitals are all over the place because many community hospitals have a bunch of private groups and it's been a challenge to get them to form heart teams. It's very politically charged. At other community hospitals the physicians are employees of the hospital. They do a better job because they already have financial alignment," said Dr. Williams.

"Everyone recognizes that where we need to be is organized by service lines and not by academic departments," said Dr. Sundt. "A patient with heart disease wants to be cared for by physicians who deal with heart disease. The patient doesn't care if they are cardiologists or surgeons, or who is in this group or that group. The patient needs his disease managed by physicians who focus on the patient. That's what the heart team is. The way to reimburse it is to put all the money into the heart team bucket and then figure out how to distribute it. If CMS set up reimbursement [for revascularization] so that it depended on a heart team" as it did for TAVR, then revascularization decisions would more consistently involve heart teams, he said in an interview.

"Right now, no one pays for [a consult between a cardiologist and surgeon]. The thing that would change this the quickest would be payment reform that rewarded the [heart team] approach," said Dr. W. Douglas Weaver, medical director of the heart and vascular institute at Henry Ford Health System in Detroit.



Courtesy Henry Ford Health System

"Employment by hospitals has driven the process of cardiologists working with surgeons on revascularization cases," Dr. Weaver added. Reimbursement issues could be resolved to some extent by more episode-based payments. What will also drive it is more integration among physicians."

But while compensation for a heart team consult on revascularization might help, and while better-integrated health systems would streamline the delivery of multidisciplinary care, inadequate compensation for participation on heart teams has not been a major roadblock up to now, many say.

"It would be awful if financial misalignment interferes with making the best decisions for patients, but I think the vast majority of cardiologists and cardiac surgeons rise to the occasion" and provide consultations even when they are not paid for it, said Dr. Patrick T. O'Gara, director of clinical cardiology at Brigham and Women's Hospital in Boston.

"I don't think reimbursement drives practice. Most cardiologists and surgeons try to do what's right for the patient. They understand that sometimes they will not get reimbursed," said Dr. Gardner.

TAVR leads the way

Dr. Douglas W. Weaver

Reimbursement for heart team members in revascularization cases may not currently be as well structured as it is for TAVR cases, but in other respects the growing number of TAVR cases and the heart teams that form to treat those cases seem to be having a spillover effect on revascularization. The TAVR experience "has catapulted the collaboration between cardiologists and surgeons in all decision making," said Dr. Weaver.

"A heart team that works together on TAVR sets the stage for collegiality" in revascularization cases, said Dr. Block. "My suspicion is that TAVR relationships will lead to closer communication [between cardiologists and surgeons] because they will see each other more often and have closer ties. The barriers [between cardiologists and surgeons] are breaking down. I don't know how far that has gone in community hospitals, because TAVR is just beginning at most community hospitals."

It's reached the community of Dr. May, who has been performing TAVR for a while in his Dallas-area practice.

TAVR programs "foster a significantly improved collaboration between the cardiac surgeons and cardiologists. At a higher level, it has also fostered a much closer relationship between STS and ACC because of their need to work together on guidelines and registry development. So in that regard TAVR has made a big difference," said Dr. May.

"When TAVR is done, everyone [cardiologist and surgeon] is in the room doing a piece of the work. When you talk about collaborative revascularization, you are talking about a decision. So the collaboration is different. With TAVR you work together and develop a combat-level closeness because of the care you all deliver to patients. For revascularization, it is a decision made over a cup of coffee, not in the cath lab," he added.

Dr. May and several others think the collaborative boost powered by TAVR heart teams, and perhaps reinforced in revascularization cases, has the potential to catalyze a more profound shift in cardiac care and professional relationships.

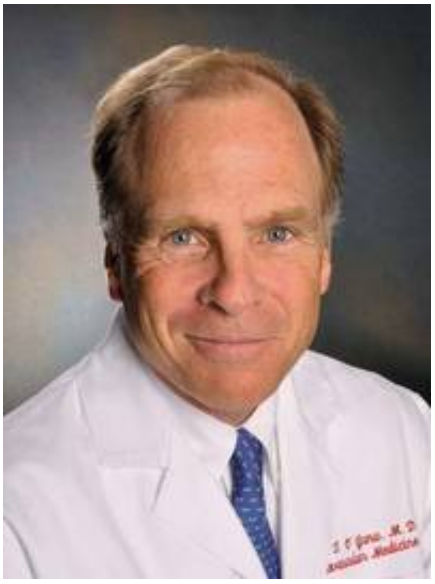
"The experience with TAVR has shown that the most fruitful way for cardiologists and surgeons to go forward is to work collaboratively," continued Dr. May. "That's a new paradigm, and it needs to be embraced wholeheartedly. It also promotes the idea of doing what is best for patients. It's not that cardiologists do PCI and surgeons do CABG and we don't talk to each other. The paradigm shift we have seen with TAVR has tremendous merit."

"It's time to bury the old PCI vs. CABG battle of the past," said Dr. Williams. If cardiologists and surgeons don't work together, "it's not good for them or for patients. When you work together, it's mutually beneficial, and most importantly it's better for patients."

What's next for revascularization heart teams?

Have heart teams for revascularization become the standard of care, is there consensus on when they should be used, and do most U.S. interventionalists and cardiac surgeons already belong to a heart team? The short answer to all three questions is maybe.

"Heart teams may be the standard of care at many [U.S.] institutions, but I can't speak for all. At Brigham and Women's, it is our standard of care for patients with complicated CAD," said Dr. O'Gara. Right now "heart teams are the aspiration, but I'm not sure it is the standard. But it was a class I recommendation that had unanimous consensus behind it.



Dr. Patrick T. O'Gara

"The ACC has focused on education to proselytize the value of this approach," said Dr. O'Gara, who is currently ACC vice president. The results of the SYNTAX trial established the expectation that among patients with multivessel disease, there would be a discussion before surgeons, interventionalists, and the patient about the optimal [revascularization] approach. But aside from the educational aspect on the benefit of doing this I'm not aware of any regulatory agency that is embedding heart teams in, say, a performance metric," the better to solidify their role in practice.

Most surgeons and cardiologists fall back on calling for a heart team for any patients with "complex" coronary disease, generally defined as patients with left main disease or triple-vessel advanced coronary disease. Those were the categories of coronary disease for which PCI's use was deemed "uncertain" by the revascularization appropriate-use criteria established last year by the ACC, STS, and several other cardiology and surgical groups (J. Am. Coll. Cardiol. 2012;59:857-81).

"I wouldn't say that for revascularization using heart teams is the standard of care, but it's being used in more and more places," said Dr. Weaver. A heart team "is not for every case; it takes time, and in most cases it probably won't change the decision. But certainly for complex cases it should be routine. At many centers it is routine – but for a small subset of patients," said Dr. Weaver. "The ACC can help define what is a complex case and help convince payers that this is useful and that we need to reward this behavior as an incentive."

In general, cardiologists and surgeons likely feel little urgency to become part of revascularization heart teams, if for no other reason than most of them probably believe they are already part of one.

"I would not be surprised if most American cardiologists and surgeons feel that they are already on a heart team. They feel: 'I practice at a place with a surgeon, or with a cardiologist – we're a team.' I don't think that anyone in private practice loses sleep because they think they are not on a heart team," said Dr. Nallamothu.

But there is probably a need for a more systematic application of heart teams to appropriate cases, a

clearer definition of appropriate cases, and increased leadership from professional societies to accomplish these goals, according to at least some experts.

"I wouldn't say that societies have fallen short, but there is a lot of work to do. It's a huge challenge, and these groups could definitely lead going forward," said Dr. Sundt.

"Societies need to take the lead on defining optimal care" and the collaborative approach to revascularization, said Dr. May. The collaborative discussions that the ACC and STS have had about TAVR is "a model" for future collaborations on revascularization and other areas of multidisciplinary cardiac care, such as mitral valve replacement.

"In the long term, I think there will be more integration of interventional cardiology and cardiac surgery, with more overlap of the procedures they use," predicted Dr. Nallamothu. As that happens, "we'll also see more team discussions about complex revascularization cases."

Dr. Nallamothu, Dr. May, Dr. Block, Dr. Gardner, Dr. Williams, Dr. Sundt, Dr. Weaver, and Dr. O'Gara all said that they had no relevant financial disclosures.

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The Heart Team