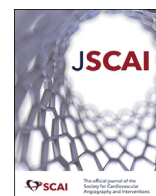




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# Journal of the Society for Cardiovascular Angiography & Interventions

journal homepage: [www.jscai.org](http://www.jscai.org)

## Editorial

## See One, Do One, Teach One? Not So Fast, My Friend

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The field of interventional cardiology has become so subspecialized that it is impossible for anyone to be completely up to date and facile on all the technologies and techniques that are being utilized. Even highly subspecialized operators within the fields of coronary, structural, and peripheral intervention may benefit from instruction from others with more experience in a particular technique. In addition, less experienced operators such as recent graduates or operators branching out into a new space certainly stand to benefit from guidance from more experienced operators. Importantly, the more complex the procedure, the longer the learning curve may be. For example, the learning curve for transcatheter mitral valve edge-to-edge repair may exceed 200 cases, a volume that may take years to achieve even at high-volume centers.<sup>1</sup> This is a far cry from the saying we had in internal medicine residency about learning how to perform procedures—see one, do one, teach one!

### The need for proctoring

We know that experience matters in interventional cardiology. Higher-volume percutaneous coronary intervention operators have better outcomes<sup>2</sup>; higher-volume transcatheter aortic valve replacement operators have better outcomes<sup>3</sup>; higher-volume alcohol septal ablation centers have better outcomes.<sup>4</sup> Much has been written about standards for sufficiency regarding various interventional procedures, but the truth is that the American health care system is not set up in a way to get patients to the institutions or operators that have the most experience with their condition. Few patients have the means and the knowledge to shop around and travel for the best care, and everyone claims to provide the best care. While data demonstrate that the majority of centers are low-volume, not high-volume, centers, restricting procedures to only high-volume centers would significantly restrict patients' access to novel therapies.

So that is where proctors come in. Operators need to learn novel and complex procedures as they become available, and patients need access to these therapies. I consider myself to be a high-volume operator working at a high-volume hospital within the structural intervention space. I have worked as a proctor and have also benefitted from

proctoring, so I have been on both sides. As such, the SCAI Position Statement on Best Practices for Clinical Proctoring of New Technologies and Techniques<sup>5</sup> is sobering in that while the focus of proctoring has rightfully been on education and knowledge transfer, we must also consider the medico-legal implications of such relationships. In my opinion, as with any other aspect of medicine, the best medico-legal protection for a physician is to follow the best practice at all times, starting with informed patient consent.

### The importance of planning

Where I think we can do much better is in knowledge transfer prior to the procedure day. I have been in situations as a proctor when I have had minimal or no contact with the industry representative and host operator(s) prior to the procedure date. In such situations, without knowledge of the cases being done and the experience and preparedness of the team, the proctor cannot assess the appropriateness of the cases being performed, the techniques utilized, or even whether they are the right proctor for the situation. I have been much more comfortable in situations in which I have had prior knowledge of the cases being performed, have communicated with the team, agree with the appropriateness of the cases, and am confident that my experience is sufficient to help the host team to achieve an excellent outcome. While the authors suggest that this process should begin weeks in advance of the procedure, that cannot always be the case, as many procedures cannot be delayed for that long. But knowledge transfer need not take weeks. The proctor can certainly receive details regarding the proposed case and proposed technique prior to being on site and can provide information regarding needed equipment ahead of time. Procedural steps can be discussed in advance via email, phone call, or virtual meeting. My strong preference is to reinforce all of this education through a formal presentation the day prior to or morning of the procedure. In doing so, the proctor and the host team can and should review the level of involvement expected from the proctor. All of this can realistically be accomplished within a few days, as in my experience, it is the rare request for proctor services that allows for weeks of planning.

DOI of original article: <https://doi.org/10.1016/j.jscai.2022.100036>.

Keywords: Interventional cardiology; proctor; medico-legal risk; best practice.

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Received 7 March 2022; Received in revised form 20 March 2022; Accepted 22 March 2022

Available online 15 April 2022

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## Debriefing

A second area for improvement is in the proctor providing constructive feedback to the team following the procedure. Often the focus is on completing the case and achieving a successful outcome, but there may be opportunities for education and/or improvement even following a successful case. In the course of a busy clinical day (which may have been slowed down by the complexity of the proctored case), the impulse is to move quickly on to the next case rather than to reflect on the completed case, but such feedback will be most beneficial if given immediately following the case before details are forgotten.

## Mitigating medico-legal risk

While the authors spend some time discussing how the level of involvement of the proctor might impact medico-legal risk, my opinion is that if the best practices outlined in this statement are followed, then the level of involvement of the proctor should be less important. If the case has been reviewed for appropriateness; the patient has been informed of the complexity of the procedure and the level of involvement of the proctor; the host team has the appropriate skills, education, and experience to perform the procedure; the proctor has the appropriate knowledge and experience to support them; and the host institution has

approved, then it would seem difficult to claim malpractice even if complications occur. In doing so, the focus can hopefully remain on excellent patient care, transparency, communication, and education rather than medico-legal risk and we can continue to bring new technologies and techniques to our patients everywhere.

## Declaration of competing interest

Dr Chhatrwalla is a proctor for Edwards Lifesciences and Medtronic.

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