Innovation can emerge from a culture of standardization

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Central Message

Novel techniques can be simple and inexpensive. We should innovate, use data to standardize frequently improve every step of every process we perform, and then restandardize the data again until next quarter.

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Jiang and colleagues¹ have presented a novel technique to obtain both proximal and distal control of the pulmonary artery control while maintaining minimally invasive techniques. The concept is old, but the technique is new. The idea is simple, inexpensive, safe, and effective. It represents another small but significant advance of our field, another shining example of innovation at low cost.

Innovation remains the optimal avenue to improve our patients' outcomes. It maximizes value by improving quality and lowering costs. But how can we possibly innovate in our current environment, where every nonperfect outcome is carefully and publically reviewed, learning curves are not tolerated, and every complication leads to a review board with root cause analysis and the blame that necessarily (despite how we message the narrative's tone) goes with it? This cultural shift (which is good) that we all live in by definition stifles innovation. All of us increasingly apply the opposite of innovation in our cultures, and that is the practice of standardization. We strive to standardized and "protocolize" most parts of our patients' care in our varied practices. This is because standardization by definition reduces variables and reduces errors. Any system that reduces errors and variables concomitantly reduces costs and therefore must improve quality and thus value. So this is good too.

A CULTURE OF STANDARDIZATION HOLDS INNOVATION HOSTAGE

What if the first time Jiang and colleagues¹ had tried their new technique, they tore the main pulmonary artery in half. How would that have been received and would we have

given them another chance to further modify their novel idea? Probably not.

Standardization must be enforced. It is the scientific rigid antithesis to the artistic softness of innovation, but both must be allowed to flourish at the same time. With proper checks and balances, both can be used to further improve our patient's outcomes while simultaneously reducing errors and costs.

This article by Jiang and colleagues¹ displays a shining example of innovation at its best. It uses only silk suture and plastic tubing that has little to no cost; it is easy, reproducible, and simple to learn and can be applied all over the world. It seems easy to teach. It is these types of small yet important advancements in our art, the art of cardiothoracic surgery, that lead to a large difference in our patients' care, allowing us, as shown in this study, to maintain minimally invasive techniques while performing concomitant sleeve resections of the bronchus and artery.

Reference

1. Jiang L, Wu L, Roque SR, Jiang G. A novel tourniquet technique for transient pulmonary artery occlusion during video-assisted thoracoscopic surgery. *J Thorac Cardiovasc Surg*. 2018;156:816-8.