ACCEPTED MANUSCRIPT

1

2	Title: now I round a Mentor
3	Authors: Luis F Alberton, MD ¹ , Patrick D. Rudersdorf, MD ² , Jeremy L. Herrmann, MD ³
5	¹ Thoracic Surgery, Robotic and Minimally Invasive Surgery, Providence Regional Medical Center
6	² Cardiac and Thoracic Surgery Associates, St. Anthony Hospital
7	³ Indiana University School of Medicine, Department of Surgery, Division of Thoracic and Cardiovascular
8	Surgery
9	
10 11	Conflict of interest statement: None
12	Corresponding Author:
13	Jeremy L. Herrmann, M.D.
14	Indiana University School of Medicine
15	Division of Thoracic and Cardiovascular Surgery
16	545 Barnhill Drive, Emerson 215
17	Indianapolis, IN 46202
18	Office: 317-944-7150
19	Fax: 317-274-2940
20	Email: jlherrma@iupui.edu
21	
22	Article Word Count: 1,700

This is the author's manuscript of the article published in final edited form as:

23 24	Central Message:
25	In order to have a successful career in the field of cardiothoracic surgery, forming mentor-mentee
26	relationship is critical, and the benefits of this interaction are unlimited.
27	
28	
29	Perspective Statement:
30	Finding a mentor can help one navigate the many difficulties faced not only during training but
31	also during one's early stages of their professional career, but this process requires diligence and
32	thoughtfulness on the part of the mentee.
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	

Throughout our lives, mentors play essential roles in shaping both our professional career and
personal life. Likewise, mentoring is a time-honored pillar of our surgical training paradigms. Dr. Loop
summarized an effective mentor as someone with high standards of excellence to emulate, "a sponsor, an
advisor, and a model". A mentor is more than a didactic teacher or technician. A mentor provides an
example of how to conduct one's professional, clinical, and personal lives and helps one to accomplish
his or her goals in those arenas. A mentor's role is to cultivate our talents and to improve our weaknesses
and should encourage introspection and self-honesty about one's talents and abilities. Mentors provide
advice utilizing seniority and experience. This role extends beyond the formal training timeframe and, if
one is fortunate, can last a lifetime.
Previous authors have eloquently described the desirable traits and aspects of mentors (Table 1).
⁴ While these may seem intuitive, it can be difficult to find those who possess all these traits.
Furthermore, the impact of a mentor can also vary from a brief period in a particular stage of one's career

This piece is written as a combined effort between an adult cardiac surgeon, a congenital heart surgeon, and a thoracic surgeon as a means of drawing upon personal experiences from different career paths to distill the concepts and methods we found most useful in our personal searches for mentors. When considering the broader meaning of a mentor, we agreed that we encountered meaningful mentors well before our professional education began in the form of parents, teachers, coaches, etc. However, for the purpose of this article, we chose to focus primarily on the mentors who have helped us during our surgical training and current practices. Our aim is to provide readers, particularly those currently in training or early career, a compilation of the methodologies we have found to be most effective for establishing our personal successful mentor/mentee relationships.

to a lifelong connection that evolves through multiple stages. A self-appraisal checklist for mentors has

been offered by Dr. Pasque, which may be a useful self-reflection tool not only for active mentors, but

also for those in search of a mentor.²

1. Find Commonalities

In the authors' experience, arbitrarily and randomly assigned relationships often do not lead to effective, long-term mentor/mentee relationships. As with any social relationship, the most meaningful mentor/mentee relationships arise from common interests that promote collegiality and trust.

Accordingly, identifying a mentor that shares similar personality traits is usually a good first step.

Additionally, successful mentor/mentee relationships are based upon positive professional attributes of the mentor (e.g., technical mastery, clinical acumen) that are also valued by the mentee. Any common interests outside the practice of medicine can further bolster this relationship.

2. Be Honest with Yourself

Understanding one's personal, professional, and academic goals provides the foundation for any mentoring relationship regarding one's career. This is true at any stage, whether it be in medical school or early practice. There is no single correct or best pathway, except that which is best suited for the individual. Not only does understanding one's goals help to identify potential mentors, but the more specific these goals are defined, the more effectively a mentor can provide guidance.

Another aspect of this is identifying one's knowledge and experience gaps. Because a mentor has climbed the career ladder beyond you, he or she can help supplement your knowledge and experience, which may have been tested only to a limited degree previously. The mentor – as a trailblazer – may be able to smooth the rough areas and lower the mountains for those who follow. Again, successful mentoring in this regard requires clarity of goals.

3. Position Yourself Accordingly

Meeting a potential mentor can occur through a wide range of venues including the ward, the operating room, lectures, and society meetings. These experiences offer the opportunity to evaluate a potential mentor in action through performance of those technical, clinical, or research-related tasks that make them a prime example. Conversely, active participation in these venues by a potential mentee

increases his or her exposure to possible mentors. A mentor needs to be able to see potential in the mentee to develop and maintain a critical level of interest and commitment necessary for effective mentoring.

4. Be Persistent and Own It

As with any endeavor, no one cares more about your success than you do. Tsai and Helsel effectively argue that mentees must actively seek out these mentored relationships and "own them". The onus is on a mentee to foster these relationships, though with due respect for our mentors' time. Work hard, be honest and be diligent with the tasks assigned to you. Mentors may lose interest in training mentees if they feel their time is not being used effectively, and this can be very challenging in the current era of work hour restrictions.

With time, as training and other career circumstances change, it is crucial to sustain those mentoring connections with periodic updates – both the good and the bad. Not only do mentors appreciate hearing how his or her mentee is progressing, timely updates can facilitate their guidance. If you are fortunate to find an effective mentor, do not lose sight of him or her! Maintaining this relationship allows one with limited experience to practice medicine as if he or she has much more experience, translating into potentially better outcomes for patients.

5. Understand Your Changing Needs

The value and role of mentors may evolve as one progresses through training and into various career stages. As one enters practice after successfully completing formalized training, he or she likely does not possess all the tools necessary to perform the most complex cases. However, the foundational building blocks are in place. It is likely that one will encounter patients with disease pathology never seen but discussing these cases with mentors can overcome this obstacle. Therefore, the importance of mentors for early career cardiothoracic surgeons cannot be overstated. While formalized training programs provide invaluable technical and clinical exposure, it is not possible to encounter every feasible clinical situation one may face in his or her own career. Adapting acquired knowledge and skill sets to new situations can be a formidable process, especially for complex cases. In the current era of outcomes and performance

monitoring, achieving successful outcomes is even more important. Discussing cases on a regular basis preoperatively to identify certain nuances or potential pitfalls may circumvent potentially bad outcomes, thus further emphasizing the value of learning from other's mistakes and utilizing the mentor's experience.

6. Bring Something to the Table

Even young graduates should not underestimate their skills. The infusion of new skills and knowledge may be one of the most significant means by which a new surgeon can immediately and positively enhance a group or program. For thoracic and adult cardiac surgery, this could involve advanced minimally invasive and robotic techniques. For adult cardiac surgery, advanced wire skills particularly regarding TEVAR and TAVR may be valuable additions to a group's practice. For congenital cardiac surgery, even different techniques in operative approaches and clinical management of specific lesions may help to diversify a group's clinical repertoire. Finding a mentor with similar interests can be critical to successfully implementing new techniques or knowledge. Particularly as clinical outcomes become more publicized, it is important to understand the practical feasibility and political climate of an institution, which can be difficult to do early in practice. An effective mentor can be a tremendous resource for guidance and assistance to enhance the success of such endeavors while possibly lessening exposure risk for the mentee.

7. Be Humble and Accept Criticism

A key role of an effective mentor is to identify a mentee's weaknesses and help him or her to improve upon them. Conversely, accepting criticism and working to improve oneself are key to self-growth at any stage of career development, and these require a certain degree of humility balanced with growing confidence and skill. In an extreme situation in which a poor clinical outcome outcomes and a mentor provides political coverage, it is even more essential to extract any constructive and honest criticism from the mentor while maintaining an appropriate level of humility.

Conclusion

Effective mentors can be key to a successful surgical career, and the lack thereof can present additional challenges as well as risk to the trainee or young surgeon. A successful mentor-mentee relationship requires honesty and diligence on the part of the mentee, particularly as one progresses through training and into clinical practice. The benefits, though, can be invaluable to both parties. Having a mentor by your side will ease the journey. More than a simple teacher or coach, an effective mentor will serve as a friend and confidant who will derive extraordinary satisfaction in helping you do what is right for patients.

150	Refere	nces
151	1.	Loop FD. Mentoring. J Thorac Cardiovasc Surg 2000;119:S45-8.
152	2.	Pasque MK. Extreme mentoring in cardiothorac surgery. J Thorac Cardiovasc Surg
153		2015;150:785-9.
154	3.	Kron IL. Surgical mentorshop. J Thorac Cardiovasc Surg 2011;142:489-92.
155	4.	Tsai PI, Helsel BS. How to build effective mentor-mentee relationships: role of the mentee. J
156		Thorac Cardiovasc Surg 2016:151:652-4.

158	Table 1. Qualities of a Successful Mentor
159	
160	Established clinician/researcher
161	Model of work/life balance
162	Willingness to pay back
163	Seniority and security
l 64	Honest appraiser
165	Trustworthy
166	Goal-setter
167	

ACCEPTED MANUSCRIPT





