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**Key Words:** resident education, educational resource, survey, examination, test preparation

## Discussion

### Presenter: Dr Alexander A. Brescia



**Dr Craig J. Baker** (*Los Angeles, Calif*). Dr Brescia, I commend you on an excellent and very clear presentation, and I also want to congratulate and admire the TSRA for the incredible work and initiative this group has shown in being proactive in developing learning content in thoracic surgery, especially given the demands of thoracic surgery training.

Rather than critique elements of this study such as the low response rate, faculty oversight, or peer review of the TSRA material, I prefer to spend some time on questions regarding the environment in which these resources were developed. Obviously, the TSRA resources were developed not by

accident, but by a group of motivated trainees who saw deficiencies in the educational resources available to them.

This occurred in a parallel timeframe to substantial efforts from the Thoracic Surgery Directors' Association, the Joint Council for Thoracic Surgical Education, and now the STS, to provide resources to our residents. Despite these efforts, your study demonstrates the current online curriculum was used by a minority of trainees in preparation for the written or certifying exams.

As someone who's been personally invested over the past 2 decades in thoracic surgery education, I can't help but feel our efforts have fallen short and maybe we didn't understand the needs of our trainees. Despite a strong relationship between the TSDA and the TSRA, it appears there are 2 relatively separate efforts to develop educational content.

My first question relates to the comprehensiveness of the TSRA platform of resources. There's a difference between preparing for an exam using various review materials versus truly understanding the wealth of knowledge that one may ascertain from more formal textbooks. Do you have any information in your study on whether thoracic surgery residents believe or don't believe more comprehensive resources are still important, not for their various exams, but for their overall medical knowledge?



**Dr Alexander A. Brescia** (*Ann Arbor, Mich*). Thank you, Dr Baker, for those comments. In terms of the comprehensiveness of the resources—I know this is something that we've also talked about in TSDA meetings—I think at this point in the evolution of the TSRA, we have such a breadth of resources that there's a variable amount of how comprehensive they are. So, everything sort of started with the *TSRA Review*, which is a relatively brief overview of everything.

At this point, we do have more depth in a lot of our resources. One that you saw is the *Clinical Scenarios* book. And you saw that the most commonly used resources for preparing for Oral Boards were TSRA resources, most notably the *Clinical Scenarios* book. So, that will be a 10- to 15-page vignette of a scenario. In text, it sort of walks through what an oral board scenario might look like. In terms of [using] traditional, more comprehensive textbooks, I think that it really depends on the learner. As you noted, in our study, there are still about three-quarters of respondents who prefer their resources in print—and that's not exclusively traditional textbooks, but it does include those.

Personally, for my learning approach, if I can use the TSRA resources to review material relatively efficiently, that will highlight areas that I can then dive deeper into in a traditional textbook. But like I said, there's really a variation among trainees of how they approach that.

One other comment from the beginning of your discussion—and this is something that often comes up. We

recently wrote a paper in *JTCVS* about these resources, and we've also included it in this manuscript. Our current review process for all of these resources is that we have a mentee-and-mentor tandem. And so, all of these chapters and sections are written by at least 1 to 2 trainees as well as a board-certified faculty mentor.

So, they're all reviewed by Board-certified cardiothoracic surgeons. And then after that, we have a 3-layer editorial process. There's a section editor. There's at least 1 to 2 primary editors, and then a copy editor before it's ultimately published.

**Dr Baker.** My colleague Dr Vaporciyan, who has been at the forefront of thoracic surgical education, taught me the word curriculumegaly. I cannot help but believe our first efforts to design the national thoracic surgical education curriculum fell into this category with an unrealistic amount of content included in the weekly assignments.

I believe this is one of the reasons the TSRA resources have become so popular. Where do you believe our efforts to develop a national educational content for residency education have fallen short, and should we incorporate, co-develop, or try to link these efforts more strongly with you in the future?

**Dr Brescia.** I think that's a great question. I don't know that I can say where anything has fallen short or that it even has, but I agree that there is definitely a huge breadth of content, and sometimes in the demands of training, you have to find the most efficient resource to learn whatever topic it is and do that. Not only focused in length, but the more integrated the content can be based on topic, the better. Because it's just easier than reading, say, 8 different resources that are combined on a topic. So, I think that integration is key, as well as being able to do it efficiently.

In terms of working together, we're happy to work with anyone. As you know, the parent organization of TSRA is the TSDA. But aside from that, we're not an STS organization and we're not an AATS organization. We will work with whomever will improve education and training for residents. And there's been a lot of developments with that lately. As an example, with the AATS, we are essentially going to set up a webinar format of those clinical scenarios. So, although it will not be sponsored by the TSDA or the AATS, it will be an AATS expert taking a trainee through a scenario that sort of simulates an Oral Board situation. There are constantly evolving opportunities for this, and anything that's going to enhance trainee education, we're open to.

**Dr Baker.** You bring up an important point about integration and it kind of highlights my next question. You brought up an important point about the continued desire for print versions of educational content. The newly released digital STS textbook has been designed to be a single resource with a lot of integration aimed at providing educational content to prepare trainees for ITE exams and Written and Oral Board preparation. How do you believe this resource will be utilized, and you have a sense from other TSRA members if its release will maybe modify current or future TSRA efforts?

**Dr Brescia.** That is a great question, and I think it's sort of yet to be seen. I have not personally used the ebook yet. I think, as you mentioned, there's still a large number of people who like print. However, within the digital formats, computer is the most popular and we're moving away from the tablet format, in terms of what the respondents were saying in current versus research trainees. So overall, I think it is yet to be seen.