



VBS|004: MENTOR CHAT

At VBS|004, two mentors outlined their remarkable careers.

BY COURTNEY M. CRAWFORD, MD, AND VAIDEHI S. DEDANIA, MD

The fourth annual meeting of the Vit-Buckle Society (VBS), termed VBS|004, recognized two leaders in retina: Steve Charles, MD, and Timothy G. Murray, MD, MBA. These two unique individuals have contributed significantly to the field of retina through research and also through training generations of retina specialists. Both Drs. Charles and Murray have been at the vanguard of innovation and mentorship.

Below, two of the VBS|004 Fellows' Foray travel grant winners have summarized the award lectures delivered by Drs. Charles and Murray. Courtney M. Crawford, MD, reviews Dr. Charles's VBS Keynote Lecture, which took the form of a Q&A interview with VBS moderator John W. Kitchens, MD. Not surprisingly, Dr. Charles's unique concoction of humor and passion shapes Dr. Crawford's discussion of his life. Vaidehi S. Dedania, MD, summarizes Dr. Murray's mentorship philosophy, which he shared with VBS attendees during his acceptance of the VBS Lifetime Mentorship Award. Dr. Murray's points of emphasis are of interest to everyone in retina: mentors seeking to improve mentorship tactics, mentees striving to understand the motivations of those who guide them, and mentors-to-be sitting on the cusp of transitioning from learning to teaching.



—R.V. Paul Chan, MD; Anton Orlin, MD; and Aleksandra Rachitskaya, MD



The Apple Tree: The VBS Keynote Lecture

By Courtney M. Crawford, MD

In delivering the Keynote Lecture at VBS|004, Steve Charles, MD, took a novel approach.

Rather than stand to deliver his lecture, titled "Inside the Innovator's Studio," he sat down for a one-on-one interview with John W. Kitchens, MD. During their conversation, Dr. Charles provided biographical information that informed meeting participants' understanding of Dr. Charles's unique role in the development of the retina subspecialty.

Dr. Charles was born on December 26, 1942. His father, Clayton Henry Charles, a well-known sculptor, was a professor and the chair of the art department at the University of Miami. According to Dr. Charles, his father grew the art department from two faculty members to thirty. "He just never stopped working," he said, "7 days a week, always work, no play." (Perhaps the apple did not fall far from the tree.) Dr. Charles's mother, Madeleine Johnson, was also a hard-worker: she had a degree in art history and was a supportive wife and mother.

Dr. Charles was exposed to medicine at an early age. His mother underwent a number of gastroenterology surgeries, and the future physician experienced a septic ruptured

appendix as an adolescent. His uncle, a world-renowned colorectal surgeon, John D. Charles, MD, was doctor to both Dr. Charles and his mother. "When you're around a person that saved your mom's life and saved your life, [medicine] is pretty impressive," Dr. Charles noted.

Dr. Charles was first exposed to engineering by his grandfather, a mechanical engineer who obtained several patents, including one for a diesel generator used in World War II. In addition to establishing his interest in engineering, his grandfather also bolstered Dr. Charles's ideals of hard work and altruism. "He was either working or helping somebody," Dr. Charles said, "from 4:30 in the morning until he fell asleep, 7 days a week." (See what I mean about that apple tree?)

Teen years were spent at Southwest Miami High School, where Dr. Charles showed promise in both football and academics. At the University of Oklahoma, his dual goals were to design diesel-powered trains as his grandfather had done and to study pre-medicine. As an undergraduate, he came to understand that, if he wanted to combine medicine with engineering, then he needed to know both electrical and mechanical engineering. Today, Dr. Charles said, he spends a third of his time in engineering endeavors. His efforts have yielded more than 80 patents in vitreoretinal surgery and another 30-plus patents in neurosurgery and other fields.



A MENTOR'S MENTORS

It should be no surprise that, before becoming one of the leaders in vitreoretinal surgery, Dr. Charles was influenced by founding giants of the retina field. Edward W.D. Norton, MD, was his mentor as a medical student and ophthalmology resident at Bascom Palmer Eye Institute in Miami. Dr. Charles described Dr. Norton as a visionary and leader who transformed Bascom Palmer by “hiring tall people, feeding them so they get taller, and eventually riding on their shoulders. But he was too humble to ride on anyone’s shoulder.”

Another pioneer, J. Donald M. Gass, MD, had an office next door to Dr. Charles’ electroretinogram and electro-oculogram laboratory at Bascom Palmer. According to Dr. Charles, Dr. Gass had an “enormous memory for every imaginable patient, ... shifting through a million patients in his head and bringing out a disease processes.” Robert Machemer, MD, taught Dr. Charles vitrectomy surgery as a quid pro quo with the National Eye Institute (NEI), allowing Dr. Charles to establish a vitrectomy program with the NEI and National Institutes of Health in the Washington, D.C., area.

AN INVENTOR'S INVENTIONS

While performing a fellowship in vascular permeability factor (now called VEGF) at the NEI, Dr. Charles invented endophotocoagulation, ultrasound B-scan, fluid-air exchange, extrusion of subretinal fluid, and coaxial cannulas. Other innovations have included his work in development of sev-

eral sequential vitrectomy systems for Alcon: the Ocutome 8000, the Accurus Surgical System, and the Constellation Vision System. While still managing a busy retina practice at the Charles Retina Institute in Memphis, Tenn., Dr. Charles performs more than 18 surgeries per week. He estimated that he has performed more than 36,000 vitrectomies in his lifetime.

Beyond his many accomplishments, Dr. Charles said he is most proud of his three daughters, Kelli Ross, MD; Kerri Charles, MD; and Marcy Charles. Dr. Charles told the audience to “work hard, play hard, be the best you can be, and give more than you take.”

“Pretty simple,” he added.

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FROM THE BMC ARCHIVE

INVENTIONS IN RETINA

By Steve Charles, MD; Derek Kunimoto, MD, JD; Samir Patel, MD, and David N. Zacks, MD, PhD
New Retina MD Volume 6, Issue 2
Find online at: bit.ly/charles316



VBS Lifetime Mentorship Award Lecture

By Vaidehi S. Dedania, MD

At VBS|004, Timothy G. Murray, MD, MBA, delivered the Lifetime Mentorship Award Lecture, titled “Vitreotomy Surgery: Teaching the Evolution AND Revolution of Complex

Ocular Surgery.” Audina M. Berrocal, MD, presented the VBS 2016 Lifetime Mentorship Award to Dr. Murray.

The message of Dr. Murray’s lecture was that mentorship during young physicians’ training has the greatest impact on their development as surgeons. After he honored his mentors throughout his career, from residency to the present, he discussed five key philosophies that are essential to mentorship, especially in vitreoretinal surgery, for both mentors and mentees.

First, pivotal to Dr. Murray’s surgical teaching philosophy is that *surgery is an acquired skill*. He said that didactic lectures are acceptable, and observation is better, but active participation is best for becoming an excellent surgeon. This includes seeing as many patients as possible and performing countless surgeries. It also includes observing

experienced surgeons operating, as there are still learning opportunities once trainees have performed a procedure themselves.

Second, he said, *what we do often, we do well*. Many talented surgeons invest a large amount of time and effort in continually enhancing their surgical prowess. Although there are some naturally gifted surgeons, most dedicate

5 POINTS ESSENTIAL TO MENTORSHIP

According to Timothy Murray, MD, MBA:

- Surgery is an acquired skill.
- What we do often, we do well.
- Lay the foundation for lifelong learning.
- Develop and maintain grit.
- Surround yourself with excellence.



uncountable hours during training and throughout their careers to cultivating their skills. In order to innovate and augment one's surgical repertoire, Dr. Murray argued, mentees and mentors alike must question everything and glean the best practices from other surgeons.

As vitreoretinal surgery is continually evolving, with new techniques emerging rapidly, an exceptional mentor, Dr. Murray said, is one who encourages mentors to *lay a foundation for lifelong learning*. The face of vitreoretinal surgery has changed dramatically over the past decade, and a decade from now the procedures we will teach residents and fellows will likely include elements that we did not learn during our training. As such, Dr. Murray emphasized that it is important to continue to learn from others and adapt your practices, especially because your role as a mentor will be to prepare the next generation of vitreoretinal surgeons for their careers.

Next, it is crucial to *develop and maintain grit*. Dr. Murray said that trainees who have grit persevere toward excellence and continue to work at a task until they have completed it impeccably. Physicians with grit make great mentors, as they have experience and they understand what it takes to work tirelessly until a job is well done.

Finally, *surround yourself with excellence*. Dr. Murray said that when you interact with people who are experienced, talented, and motivated, you can excel by learning from their experiences. This is essential for learning novel surgical methods and for developing and understanding good surgical form. This is especially important in a field such as vitreoretinal surgery, in which experience can guide the development of surgical skills.

By focusing on these five underpinnings of professional development, Dr. Murray said, vitreoretinal surgeons can perfect their expertise and ensure that they will grow with the field. ■

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MEETING NOTES FROM VBS 2.0 LAS VEGAS: LIFETIME MENTORSHIP AWARD LECTURE

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