

Creating Master Surgeons

As part of our focus on education, the Surgery Synopsis team interviews one of our faculty who has played a huge role in developing residency education, both within the department as well as nationally, Dr. Ed Verrier. As the long-time Program Director of the CT Residency Program, Dr. Verrier is passionate about residency education, passionate about better understanding adult learning, and passionate about creating ever better teachers. He has written and presented extensively on educational topics, including a seminal lecture that was turned into an article, “The Elite Athlete, the Master Surgeon.” It was an inspiring interview, and we hope you enjoy reading it.

SS: You are a champion of medical education. You’ve chosen to strongly focus much of your academic career on medical education. Given your myriad skills as a CT surgeon of highest reputation and a researcher, what drew you to the educational mission so strongly?

EV: Whether you think about doing 1 surgery or 100 surgeries, you are affecting the lives of those patients and families. That’s good and impressive; but when you teach someone to do surgery, if you’re an effective teacher, you can make an impact that far outlasts your own lifetime. When I look at the 65 residents I have trained during my time as Director of the CT residency program, I know I have helped to touch thousands of lives, many more than I could just with my own surgical skills.

SS: What are the most significant changes you’ve seen in graduate medical education – as you look at it historically and over the course of your career?

EV: Actually, the foundations of surgical education have only changed a little. Society has changed a lot, technology has changed medicine, and financial constraints on medicine have dramatically changed how we practice. Major advances in medical knowledge have been realized and new tools and techniques are abundant. Surgical complexity and surgical specialization has dramatically increased. But the methods by which we teach new surgeons have actually changed very little.

SS: If the basic medical education methods have been in place for over 100 years and we continue to educate good surgeons, is a change actually needed?

EV: I believe so. Too often our teaching relies on methods that data show are not as effective as they can and should be. We too

often teach our students to defer to the experts in the room, thus discouraging them from stepping outside their comfort zone and learning experientially. We rely heavily on passive listening techniques (e.g., “Death by Power Point”) and we expect adult learners to “learn” by dumping lots of facts and figures on them.

But in reality, the adult learner learns experientially and by deliberate practice. The adult learner learns through active listening and, most importantly, I believe that the adult learner learns when they have teachers that go beyond teaching and mentoring to become “coaches.” This is something I have grown to feel very strongly about over the past few years, and which I talk about in my article “The Elite Athlete, the Master Surgeon,” which was published based on the John H. Gibbon Jr. Lecture I was invited to deliver in September 2016.

SS: For those who have not read the article, what do you see as the differences between “teaching” and “coaching?” Why should we want to have our faculty become “coaches?”

EV: Teaching is too often passive. It generally is teacher-centric and not learner focused. A teacher, who is thought of—by themselves as well as the student—as the expert, prepares material and passes it on to the learners, usually in a passive way: through lectures or verbal instructions to the students as the teacher performs a surgery or interacts with a patient or their families. It’s a “one size fits all” approach.

Coaching, on the other hand, is specific and learner-focused. As a coach you ask questions like “Where is this learner in the course of their learning? What can I do to help them get out of their comfort zone and learn by direct experience? How can I increase learning opportunities and ensure those opportunities are learner-focused?”

If you think about it, surgeons and athletes have a lot in common: both professional athletics and surgery attract talent. Both must make decisions in the heat of the moment. Both must be able to focus attention and eliminate distraction. Both must communicate with teammates to execute. Both work with broad performance systems or operational



**Dr. Edward Verrier, Professor,
Division of Cardiothoracic Surgery**

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philosophies, but still often need spontaneous creative thinking skills. Both work under the limelight of transparency and exposure. Both need to be able to deal with loss and both need passion and perseverance for sustainability. The one difference to keep in mind is that the athlete performs to provide entertainment and the surgeon performs to save lives and relieve human suffering.

Sports teams do not have “teachers,” they have coaches. Coaches that know what the individual player needs; coaches that will create the environment that allows the team members to try new things and to learn by doing.

Coaches are vitally important to athletes; coaches in the surgical realm are equally vital to creating the master surgeon. Coaching is a skill that can be learned and I believe that in order to have more master surgeons, we need to develop more surgeon coaches.

SS: The Department of Surgery’s resident and fellowship programs are routinely ranked in the top 10 programs in the country. In your opinion, what has been the secret of our success?

EV: I agree, the Department of Surgery residency and fellowship programs (all of them) are in the top ten in the USA: we are creating outstanding surgeons and some true “Master Surgeons.” I think this is true because we have committed to elevating the educational mission in this Department and we do have a number of faculty that are truly gifted coaches.

The Department of Surgery has shown a strong structural commitment to our

education program. For example, several years ago we changed our promotional criteria to recognize teaching as a pathway to faculty promotion. This allows those who have passion and ability as teachers and coaches to pursue education as a promotional pathway. In addition, the Department also hosts an annual training focused on improving educational methods, which is mandatory for all faculty.

And several years ago the Department created the role of Associate Chair for Education, which is held by **Karen Horvath**.

I don’t believe we should rest on our achievements. I believe that we do need to continually examine and challenge our mindset toward education. I feel that one’s mindset is often not programmed for growth and improvement. It is too often fixed and what we believe is hidden from our conscious mind. Fixed minds interpret and respond quickly without serious consideration, resulting in teaching that is built on the approach “that’s the way I learned; if it’s good enough for me, it’s good enough for them.”

Part of her work involves leading the Residency Program Council, which is comprised of all Program Directors and Associate Directors and helps to guide and coordinate all of our departmental educational activities. This has helped to move our education program forward as a Department. This cross-department program collaboration and coordination would likely not be possible had the

department not had the foresight to create that position. Dr. Horvath has filled the role admirably for several years. This is all important and commendable work and has done much to keep our program in the top 10.

SS: But, in your opinion are there other or more things the Department needs to do?

EV: Yes. I don’t believe we should rest on our achievements. I believe that we do need to continually examine and challenge our mindset toward education. I feel that one’s mindset is often not programmed for growth and improvement. It is too often fixed and what we believe is hidden from our conscious mind. Fixed minds interpret and respond quickly without serious consideration, resulting in teaching that is built on the approach “that’s the way I learned; if it’s good enough for me, it’s good enough for them.”

One example I believe needs examination and change is our approach to didactic teaching. We need a paradigm shift. Right now, the approach is often, “I impart knowledge to the students—it’s their job to take it in and remember it.” We need to turn that into a learner-focused model. A model demonstrated by an approach called “flipping the classroom.” Flipping the classroom centers on the learner, with their first exposure to new material happening outside of the classroom (e.g., readings, lecture videos), after which learners do the harder work of application, analysis, synthesis and evaluation inside the classroom where they can learn from peers and the instructor. This has shown to be an effective way to impart didactic material.

Individually, all of us who teach students, need to have a growth mindset and continually adjust how we approach our learners. I personally approach each resident differently so that the learning opportunities are maximized. I actively try to approach my interactions with residents as a coach would – from the learner’s perspective.

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I would recommend that the Department as a whole increase support of the efforts of faculty to become ever better teachers and coaches. I think the Department's educational programs would benefit from systematic training of faculty in adult learning methods. Some will become coaches and all will become better teachers. Not everyone, not even great clinicians, are destined to be great coaches. But we need to identify, cultivate and develop those with the passion and grit for education to become great teachers and coaches. We don't do enough of this; we don't do it systematically.

EV: The Department needs to help create the environment for a growth mindset to be unafraid to continually evaluate our commitment to our teaching mission. We need to continue to, systematically and structurally, incentivize behaviors and activities that will move it forward. We need to actively engage in actions that advance the science of education, because it is a Science (as well as an art). And we need to give our education mission the academic weight that has traditionally been held for our research mission.

SS: We have read "[The Elite Athlete, the Master Surgeon](#)." At the end of the speech/article you state that we need to change the conversation and then follow with a number of considerations that would get and keep the conversation going. We would invite everyone to read those considerations, but in closing, can you tell us what you think is the most important of these consideration?

EV: I guess my final thought would be that time waits for no one and change is very difficult (especially for surgeons). But training of the next generation of surgeons who ultimately become better than ourselves has to be our overriding goal as educators. With a growth mindset, internal grit, deliberate practice and coaching, that goal is obtainable.

THE HARKINS' CORNER

Dear UW Surgical Community,

Dr. **Nicole Zern**, Harkins Society Treasurer, Assistant Professor, Division of General Surgery, and I are thrilled to be starting another academic year as the Harkins Society Leadership team! We just finished out a beautiful Seattle Summer including the graduation receptions for our many finishing trainees. We wish them all the best in their future endeavors!



Dr. Greta Bernier

As the weather turns cooler, we are focusing all our attention to our upcoming Autumn events—The 69th Annual Harkins Symposium for resident education and the UW Department of Surgery reception at the American College of Surgeons.

- **October 12th– 69th Annual Harkins Symposium** to be held at Alder Auditorium 7:00 am–2:30 pm (on UW campus). This all-day symposium highlights the pearls of practice of our Department of Surgery faculty, concluding with the **Annual Alfred A. Strauss Lecture** given this year by Dr. Jonathan Woodson. We are honored to recognize the Harkins Distinguished Alumnus at this event, which will be followed by the **Annual Harkins Society Banquet Dinner**. All Harkins Members and current faculty are invited to attend! This year the dinner will be held on board the MV Skansonia, a historic ferryboat permanently docked at the south end of South Lake Union. Please see our website www.harkinssociety.org to become a member and/or register for the dinner.
- **October 23rd – UW Department of Surgery/Harkins Society Reception at the American College of Surgeons**. This event is one of the most highly attended each year and is always a great time to catch up with colleagues from across the country and world! This year's reception will be held at Legal Harborside in the Boston Seaport District at 6:30 pm. We are looking forward to seeing you all there for drinks and appetizers!

As always, we encourage you to join the Harkins Society at any time using our website www.harkinssociety.org. If you have any questions, please contact us at uwHarkins@gmail.com. We look forward to seeing you all soon!

Sincerely,

Dr. **Greta Bernier**
Harkins Society President