Building a successful residency program:

Insights from an award-winning program director

by Lola Butcher

In February, Karen Horvath, MD, FACS, was honored by the Accreditation Council for Graduate Medical Education (ACGME) with the Parker J. Palmer Courage to Teach Award. This honor recognizes Dr. Horvath as one of 10 outstanding residency program directors in the nation.

Dr. Horvath did not intend to head the residency program when she joined the University of Washington department of surgery in 1998. A graduate of New York Medical College, she completed a residency in general surgery at Columbia University, with a surgical research fellowship in colorectal surgery and a clinical fellowship in surgical critical care at Mount Sinai Medical Center.

After residency, she moved to Oregon Health Science University and Legacy Emanuel Hospital for a fellowship in laparoscopic surgery and on to Tokyo

for a visiting fellowship in transabdominal and endoscopic ultrasound.

Then she arrived at the University of Washington School of Medicine, the only academic medical center in Washington, Alaska, Idaho, Montana and Wyoming.

But the medical school is also a research powerhouse, ranking first among public medical schools—and second among all medical schools—in federal research funding. In fiscal year 2007, UW Medicine faculty received $579.7 million in National Institutes of Health research awards.

The department is affiliated with four Seattle-area medical centers: Children's Hospital and Regional Medical Center, Harborview Medical Center, Veteran's Affairs Puget Sound Health Care System, and the University of Washington Medical Center.

Shortly after arriving at the university, Dr. Horvath was asked to serve as assistant program director. In 2002, Carlos A. Pellegrini, MD, FACS, chairman of the department of surgery at the University of Washington and a Regent of the College, asked her to become residency program director and chair of the department's resident education committee.

Why she was nominated

What had convinced the ACGME committee to select Dr. Horvath for the Parker J. Palmer Courage to Teach Award was the endorsement she received from Dr. Pellegrini. When Dr. Pellegrini learned of this award program for residency program directors, the deadline for making nominations was only one week away. But he believed his colleague deserved to be recognized, so he moved into high gear.

He sent notes to several residents and faculty members, hoping that at least one of each might carve out a few minutes to write a letter in support of Dr. Horvath's nomination.

"Since the deadline was only a few days away, I expected that many would not find the time," he said. "To my surprise, 100 percent of those asked sent me a letter within 24 hours. This is perhaps the best expression of Karen's perceived value to our residents and our faculty."

His nomination letter rattled off Dr. Horvath's long list of accomplishments, but its summation is what stands out: "One meets a lot of people when working in the academic environment," Dr. Pellegrini wrote. "Once in a while you find a superstar in every respect—professionalism, clinical acumen, the courage to teach and to stand always for what is right, a person who you cherish the opportunity to share your work with. Karen Horvath is just that person."

One of her primary attributes, Dr. Pellegrini said, is fearlessness in a time of rapid change in surgical education. "If you're afraid of change and you want to keep the old models, then you are not going to be able to move forward," he said.

Indeed, Dr. Horvath identifies constant adaptation to the changing educational requirements and the evolving needs of the surgical residents to be one of her top priorities.

Following are Dr. Horvath's insights regarding various components of surgical education today.

The 80-hour workweek

Dr. Horvath and her colleagues developed UWCores, a computerized rounding and sign-out system to improve the quality and efficiency of patient hand-offs, to help meet the challenge of the 80-hour workweek.

"The 80-hour workweek has been very good for residents because they are much more well rested, which makes it easier for them to focus not only on patient care but on other competencies," Dr. Horvath said. "We, along with many others around the country, have written about our concern about the increasing number of patient handovers, which is one negative effect of the 80-hour workweek. Communication errors are a problem in health care, and when the number of times that you hand over a patient to another physician increases, the potential for more errors increases as well."

With the UWCores system, the residents do not have to spend much time in the morning on tasks such as looking at the computer and writing down by hand all of the patients' laboratory values. Instead, the data are available electronically and residents just need to press the print button. According to Dr. Horvath, this system saves residents a substantial amount of time, allowing them to improve the continuity of patient care by decreasing the number of patients missed on resident rounds. This program has

generated much interest from institutions across the country.

Dr. Horvath believes systemic problems related to communication and team-based care surfaced long before the 80-hour workweek. But when the 80-hour workweek was adopted, she said, ongoing problems were basically multiplied by a factor.

According to Dr. Horvath, a paper that she wrote along with Erik Van Eaton, MD, a former resident, and Dr. Pellegrini reflects the authors' thoughts about some of the important ways that surgical training is facing fundamental changes.* Whereas the traditional sense of professionalism required a clinician to practice unlimited devotion to the care of every patient, she noted, surgical residents today have a limited amount of time with patients, an increasing amount of responsibilities at the hospital, and a larger team sharing in the care of their patients.

"With the rising complexity of health care in the last quarter of the 1900s," Dr. Horvath said, "surgical education has added more and more onto residents' backs until they were pretty much maxed out before the 80-hour workweek was implemented. Computerized axial tomography, positron-emission tomography, and magnetic resonance imaging scans did not exist until the latter part of the last century. The complexity has skyrocketed, and now the residents have to transfer all that information every time they hand off a patient. So, both the hours restrictions and the complexity of care are limitations to the idea of unlimited devotion to their patients or 'professionalism.'"

The authors believe the challenge of doing more in less time requires a new, explicitly taught approach to professionalism. This methodology should include a clear understanding—on the part of faculty and residents—of trainees' responsibilities and a new way for residents to have "patient ownership."

"We believe that it's possible for residents to still 'own' their patients, but it may just look different than it has in the past," Dr. Horvath said. "It's not necessarily worse, just a different context. Our educational programs and patient care systems must improve communication and make team-based care easier, and surgical educators must be the authors and role models of these concepts."

Dr. Horvath acknowledges that a project of such scope is an enormous undertaking, noting that she doesn't know if she will ever feel as though the task is "done." After the paper was published, however, the dean of the University of Washington Medical School appointed Dr. Pellegrini to lead the School of Medicine's standing committee on professionalism—the Continued Professionalism Improvement Committee—which is charged with stimulating activities at all levels of the school that lead to improvement in professional behavior, by finding ways to effect these kinds of changes in meaningful and practical, not merely theoretical, ways.

EVATS

An EVATS (emergency coverage, vacation, academic project, and technical skills) rotation is an innovation from Dr. Horvath's department to provide residents with a specific time for simulation training, vacation, covering for emergency absences, and formal learning in the ACGME competency areas that are not covered during other rotations.

According to Dr. Horvath, the EVATS experience in her program has been extremely positive, but recognizing that every program is different, she does not know how easily it could be adopted into other programs. She and her colleagues have written about EVATS, partly to share this particular system with other programs that want to implement it, but mostly in hopes that sharing knowledge about such an innovation might stimulate others to create something even better for their own program and others.†

International medical graduates

Dr. Horvath's department has also implemented a program for improving the success rate of international medical graduates (IMGs). When any resident leaves the program in the middle of the year, Dr. Horvath said, it creates problems for the other residents because it affects everybody's

*Van Eaton EG, Horvath KD, Pellegrini CA. Professionalism and the shift mentality: How to reconcile patient ownership with the 80-hour work week. *Arch Surg*. 2005;140:230-236.

†Horvath KD, Mann GN, Pellegrini CA. EVATS: A proactive solution to improve surgical education and maintain flexibility in the new training era. *Curr Surg*. 2006;63(2):151-154; and Horvath KD, Pellegrini CA. Designing an EVATS rotation for your program. Available at: http://www.facs.org/education/rap/horvath0406.html.

schedule. "And," she added, "it is heartbreaking to watch any students fail when they are just not in the right place."

Though many IMGs are very qualified for residency, identifying the correct match for resident and residency program is difficult. "Just like U.S. medical school graduates, not every international medical student will do as well in program X as he or she will in program Y," Dr. Horvath said. "But we often find that IMGs will take whatever they can get and sometimes they are definitely mismatched to a particular program."

Dr. Horvath's department is also seeking to confront the major challenges IMGs face. "English is usually their second language. The U.S. medical students have already had two years of training in the U.S. hospital system. They know how we think, how the computer systems work, how the teams function, the hierarchy, the culture of the surgical team, and how we communicate with each other. So the IMGs often find it is difficult to catch up because they started 10 steps behind at the gate," Dr. Horvath said.

Her department has developed a certificate program that admits approximately six international students each year. For eight weeks, these students are essentially functioning—and being evaluated against the same high expectations—as fourth-year medical students by Dr. Horvath and her colleagues.

This system gives the IMGs and the faculty the opportunity to see if the IMGs are suitable for and comfortable in working in a U.S. hospital. At the end of the eight weeks, some decide they do not want to train in the U.S., but some of them go on to become residents in Dr. Horvath's program or another—and do extremely well. In fact, Dr. Horvath said, "Some of the University of Washington's super-exceptional graduates have been people who started out in this program."

Challenges of today's surgical educators

Dr. Horvath believes there are two big challenges for today's surgical educators: (1) teaching patient ownership (or professionalism) and team communication skills to residents in this new era, simultaneously defining the new system and teaching the teachers while also teaching the residents and students, and (2) keeping pace with the exponential growth rate of change occurring in surgical education and in other areas of health care while maintaining the same or better level of clinical training in surgery.

"Certainly the ACGME competencies project and the 80-hour workweek and all of the new outstanding opportunities for training with simulation and other initiatives are really wonderful," Dr. Horvath said. "They are providing us the opportunity to train surgeons even better than we did in the past." However, she noted, with significantly fewer hours in which to do it, there are major challenges. Though there are positives, such as the new hospital requirements like the Health Insurance Portability and Accountability Act of 1996 and The Joint Commission's efforts to improve health care, she said, the tradeoff in the many positive outcomes is that they mean more steps in the process, more forms to fill out, and more complexity to effect task completion.

"Leaders in graduate medical education around the country have acknowledged that there is a limit to how much residency programs and residents can handle beyond patient care activities. I don't think anyone knows where this ceiling is, but it definitely has a finite capacity," she said, adding that it is essential to be very careful about not compromising the clinical experience for residents too much. "The experience of taking care of patients is really one of the best educational tools that we have, and at least for surgery, we've already started to compromise it," she said.

Dr. Horvath commented that as she spends more time working in this field, she realizes that with many new, positive things happening in surgical education, finding ways to streamline the system is imperative, suggesting that adjusting computer programs to perform old and new tasks could help residents gain more time instead of extra work.

"But we also need to sit down and assess all of these many things we are doing—and maybe decide that some them don't need to be done any more," she said. "It is crucial that we think about this, because the system does not have infinite capacity. In the end, I believe that if we can meet both of these challenges, we will be able to train better surgeons in less time, and our patients will benefit." Ω

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