SPRING 2024 | THE EDUCATION ISSUE

ON THE CUTTING EDGE

OHSU Department of Surgery Newsletter

The Education Issue

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Message from the Chair

Kenneth Azarow, M.D., F.A.C.S., F.A.A.P.

As we begin a new academic year, I'm able to report a notable transition taking place in our general surgery residency. Karen Brasel, M.D., M.P.H., F.A.C.S., has stepped down after leading our program to national prominence over the past decade. She assumed her new role as vice president of the American Board of Surgery on May 1. During Dr. Brasel's tenure she took on a national role as an ABS director, acted as an Entrustable Professional Activities champion and serving as an ACGME Surgery Reviewer Committee member and Chair of that committee. She also brought the "SENT" (Surgical Education Numbered Trials) program to our residency, of which we participated in the FIRST and SECOND trials and are now engaged with the THIRD trial. All of these are examples of approaching general surgery residency from a holistic and wellness perspective.

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Chairman's Message, continued

Dr. Brasel has set the bar extremely high, and we have formed a search committee and launched a national search for her replacement. The search committee is led by Dr. Sima Desai (program director of the internal medicine residency) and includes representatives from the School of Medicine and within our residency. I am happy to report that we have had an impressive response and will be bringing 4 semifinalists to campus this summer for interviews.

Dr. Brasel's additional departmental role was as Vice Chair for Education. I would like to point out that besides our general surgery residency we also have two other primary certificates that we now train for: our plastic surgery residency and just this past year we started an integrated vascular surgery residency led by our program director **Enjae Jung, M.D.** Along with these three primary certificate residencies we also have expanded to 10 fellowships. Of these, half are ACGME-approved for secondary training certificates through their relative specialty Boards. Having Dr. Brasel as a senior educator, advisor, and confident for our fellowship program directors has been a luxury. This year the Vice Chair position will remain vacant until our general surgery residency director recruitment has been completed.

In the interim, I am excited to introduce **John Stowers, D.O.**, as our provisional residency program director. For those who are not familiar with Dr. Stowers, he came to us from the Portland VA in 2018. He has a robust general surgery practice and is an expert in minimally invasive

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Chairman's Message, continued

and robotic surgery. He has been involved in our residency education program since he moved to Portland, following a distinguished career in the United States Air Force. As VA faculty, Dr. Stowers has served as one of our associate program directors and as director of our surgical simulation center education program. Dr. Stowers' current challenges include continued adoption of EPAs into our residency evaluation process and examining and evaluating our residency given our future integration with the Legacy Health system. Two of Legacy's hospitals already act as major teaching locations for our residents on rotation.

Lastly, I would like to acknowledge the fine work that our residents have done this year in addressing not only their own wellness but that of the entire department. In what will become a yearlong event, the **TORCH Tournament** was successfully launched in January, with awards, team-based functions and wellness events. Teams are randomly selected and the tournament serves to integrate the department, help deflect from the daily grind, and is entirely managed by our residents with the participation of faculty and staff. I encourage you to read further about the Tournament and its conception in this issue of On the Cutting Edge.

I hope this education-focused issue of our department newsletter serves to bring you, our department, alumni, and friends, in on the educational progress, programs, and accomplishments of the department this past year, all of which continue to be remarkable. I look forward to introducing our new residency program director in the very near future.

-Ken Azarow

Dr. Brasel has not only been an incredible program director but also an amazing role model

Dr. Karen Brasel named Vice President of the American Board of Surgery

Commemorating 10 years as residency program director

On May 1, **Karen Brasel, M.D., M.P.H., F.A.C.S.**, stepped into her new role as Vice President of the American Board of Surgery – and reflected on 10 years as OHSU's general surgery residency program director.

When Dr. Brasel was recruited to OHSU in 2014, the residency program was already the largest in the nation and benefited from unique relationships with urban and rural partner hospitals.

Dr. Brasel took that edge and ran with it. She championed and cultivated what she often referred to as a "choose your own adventure" model of training – a matching of training paths with residents' individual career goals. Whether entering into advanced specialty training or jumping into general practice – or even leaving surgery – OHSU surgery residents are given the support and opportunities they need to succeed. It sounds easy enough at a certain level but when the program is comprised of over 125 unique residents it leans towards exceptional.

"Dr. Brasel has been not only an incredible program director but also an amazing role model. It has truly been a privilege to be one of her residents and get to see all of the amazing things she has accomplished while also being extremely kind, thoughtful, and protective of all of the residents. She is a fierce advocate for us and that is what makes her and this program so special." – **Lindsey Loss, M.D.**, 4th year resident

While relentlessly advocating for her residents' goals, Dr. Brasel's tenure also ushered in the age of competency-based education. The American Board of Surgery, with committee members including Dr. Brasel, spearheaded the initiative over the past decade along with the development of the newly launched Entrustable Professional Activities evaluation system. OHSU and 27 other institutions piloted the project in 2018. In 2023, 18 core general surgery EPAs were implemented nation-wide, and 15 vascular surgery EPAs are set to launch this fall. Dr. Brasel will continue her oversight of this work as the new ABS Vice President.

In addition to her national efforts, Dr. Brasel has worked diligently in partnership with our renowned VirtuOHSU simulation program and its directors (beginning with Dr. Donn Spight, then Dr. Erin Gilbert and most recently Dr. John Stowers) to develop a truly robust set of skills labs for residents. The past 3 years saw the successful

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Commemorating 10 years, continued

reaccreditation of the simulation program under **John Stowers, D.O.**, and the addition of numerous training modules covering an even wider array of surgical specialties, subspecialties and procedures.

Work-life balance, something unheard of for most residency programs in the past, has also served as a beacon of change under Dr. Brasel's leadership. Not only are residents' working hours defined and respected, but family-life is better advocated for via newly set policies addressing on-call duties during pregnancy, lactation needs, and the division of night float rotations into 2 shorter shifts.

Lastly, it would be impossible to summarize the past 10 years without recalling that nearly half of Dr. Brasel's leadership occurred during or post-pandemic. The degree to which she, the trainees and the education team navigated that turn was hairpin and with little room for error. The Department of Surgery is incredibly proud of Dr. Brasel and her team for immediately adopting virtual tools, providing excellent communication, and understanding the immense importance of uninterrupted surgical education.

While the majority of education has returned to in-person, certain program pivots have proved to be invaluable and likely permanent. A prime example of this is the process for residency interview and recruitment. Campus visits were previously the national status quo for applicants, with medical students flying in at their own expense for interviews with multiple faculty, an introduction to the city and a night out with current residents. Travel limitations during Covid changed all of that and OHSU's model today is a hybrid form of all-virtual interviews with the invitation for a campus visit between applicant and institution rankings. It's a much different approach from pre-2020 but what it does encourage is a more diverse pool of applicants. Students from across the country who might be deterred from applying due to physical distance are now more likely to apply and interview online. The removal of travel expenses from program applicants has geographic as well as socioeconomic impacts and ultimately supports a wider net of interest.

Suffice it to say, Dr. Brasel has left an undisputable legacy as residency program director. Her bridge from past to present has been paramount. Oregon's first residency program was established in 1955 under OHSU surgery chairman Dr. William Livingston. The program flourished under ensuing leadership and in 1995, all other Portland-area hospital residencies consolidated at OHSU. Those hospitals then became affiliate sites for OHSU surgery rotations. General surgeon and educator **Karen Deveney, M.D.**, served as the first program director of the newly consolidated residency from 1995-2014 and built the program into the largest in the country. That stature, under Dr. Brasel's watch, holds today.

A few words from Dr. Brasel's colleague and Head of the Division of Abdominal Organ Transplantation, Erin Maynard, M.D. (who arrived to the department 1 year after Dr. Brasel):

"To me, Karen has always been more than the program director. Back in 2015 when I found out I was coming to Portland, a mutual friend introduced us, and she became my mentor, advocate and friend. I would say that in those initial years as a junior faculty, Karen impacted me and my career as much as the residents she trained. What I admire most is how she can be simultaneously firm, objective, and compassionate when tackling a difficult problem. She is encouraging and can lend an ear but also point out blind spots in a way that helps those around her grow and learn. She is a fierce resident advocate and her impact reaches far beyond OHSU."

Effective May 1, Dr. John Stowers has assumed the position of interim program director. Dr. Stowers joined the department in 2018 and has been actively involved in residency education since 2020, successfully overseeing the reaccreditation of the simulation and robotics curriculum. A national search is underway for the department's next residency program director.

Dr. Brasel will retain her position as Professor of Surgery with the OHSU Division of Trauma, Critical Care and Acute Care Surgery while serving as Vice President of the American Board of Surgery.

Simulation-Based Training

No Limits

OHSU's surgical simulation program VirtuOHSU has long been an educational pillar of our residency and fellowship programs, as well as the School of Medicine and School of Nursing. VirtuOHSU was first established in 2007 by Drs. John Hunter and Donn Spight with administrator Elena An, back in the post da Vinci days as technological advances became mainstream. **VirtuOHSU recently received an overhaul and reaccreditation** under Simulation and Robotics Education Director Dr. John Stowers (now interim residency program director).

When asked what procedures benefit most from simulation-based training, Dr. Stowers' response was an emphatic ALL. His oversight of the general surgery program and facilitation of reaccreditation over the past 4 years initiated a wave of multidisciplinary new curricula development and incorporation of what Dr. Stowers refers to as "low hanging fruit" – relatively inexpensive training modules and re-vamping of existing curricula to address gaps in learning.

Early surgical simulation training was predominantly focused on cadavers, live animals and nontechnical skills such as suturing and knot-

John Stowers, D.O.
Interim Residency Program Director
Simulation and Robotics Education Director

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Simulation-based training, continued

tying. What's emerged today is a combination of the former with the technological advances of robotic training, 3D printing and Virtual Reality.

The general surgery program has expanded its simulation curricula for the current year to include:

- R5, R1 live patient model training focused on chief and intern team building, intra-operative teaching, and minimally invasive surgical core tenets of abdominal entry techniques, running the bowel, and core procedural skills such as cholecystectomy.
- R2 cadaver vascular extremity exposure lab focusing on core skills of upper and lower fasciotomy, vascular exposure and dissection of the extremities to facilitate clinical experience.
- R4, R5 basic and advanced endoscopy course partnering with our GI fellows and faculty to enhance the technical skills for our senior residents going into advanced MIS fellowship or clinical practice.
- Updated R2 bowel anastomosis dry lab focusing on small bowel hand sewn anastomosis and low pelvic colorectal anastomosis (stapled and hand sewn).

In addition, the program has polished the bi-annual multi-specialty robotics mobile event to incorporate high-fidelity robotics procedural training for general surgery, MIS, thoracic surgery, transplant surgery, thoracic surgery, urology, and OB/Gyn with planned future incorporation of APP and OHSU student learners.

More to come this year:

- R3, R4 cadaver hernia lab focused on inguinal dissection, tissue-based repairs, ventral hernia including retro-rectus and myocutaneous advancement flap techniques.
- R5 cadaver lab focusing on specific procedures and assessment.

Limitless potential?

With the current abundance of available tools and technology, simulation-based training opportunities are theoretically limitless. The technology is there to produce highly realistic 3D replicants of almost any organ, disease or situation and VR can put that training into realistic practice. Dr. Stowers sees the limitations as primarily logistics-related: availability of financial resources, physical space for training, available time of learners and instructors, and the volume of learners for any given module.

Simulation-based training is a collaborative process

When asked about the process of incorporating new simulation modules into the curricula, Dr. Stowers had a ready example. Just that morning he had attended Grand Rounds presented by a guest lecturer on the topic of gender-affirming surgery. A conversation afterward with gender surgery fellowship director **Monica Llado-Farrulla, M.D.**, identified training challenges within this relatively new field in terms of understanding patient anatomy following surgery. And just like that, the basic premise of SBT had begun: identifying a problem and collaborating on a solution. Dr. Stowers is currently in contact with Dr. Llado-Farrulla to discuss a new 3D printed anatomical model and forecast its training potential, which would entail, 1) identifying a specific learner group or groups, 2) identifying common medical situations and challenges, and 3) creating interactive simulation that engages those scenarios.

Does simulation replace See one, Do one, Teach one?

Simulation-based training will never replace the need for hands-on real-life scenarios in the operating room. But it is now essential for surgical prowess in a fast-evolving field that has an increasing number of proven technological tools. Medical error remains one of the leading causes of death in America but has seen a well-documented decrease with the emergence of technological advancements in combination with simulation-based training.

> *EPAs are units of work a physician performs that can be directly observed – American Board of Surgery*

THE AMERICAN BOARD OF SURGERY

Entrustability vs Autonomy

EPAs and the Move to an Entrustability-Based Evaluation System

Summarizing surgery education over the past decade would be impossible without the introduction of Entrustable Professional Activities and competency-based assessment. The concept of entrustability is evolving to take the place of the idea of autonomy. In medical education, a trainee is never truly autonomous but is granted ever increasing levels of entrustment by their supervising surgeon. The implementation of the EPA project is a way to capture these complex assessments of resident entrustability across a wide range of domains.

ACGME first approved a series of core competencies back in 1999 that included broad areas such as medical knowledge, professionalism and patient care. What didn't exist though was a measurable method for communicating those competencies in the healthcare arena. **EPAs were conceived in order to translate established competencies into clinical practice.** And they are quickly becoming the backbone of surgery education.

The ideal future state

Trainees who formally demonstrate competency are then entrusted to perform certain procedures or tasks with decreasing supervision. While we are working on data collection, and data validation right now, we are looking to the future and ways to feed forward summative assessments of resident entrustability to other faculty and, eventually, board applications and jobs.

EPA Implementation Timeline:

2018 – 2020
The American Board of Surgery EPA program piloted at 28 general surgery residency programs across the country – including OHSU – based on 5 index EPAs.

July 2023
The American Board of Surgery implements 18 core general surgery EPAs
As of March 31, 2024, over 75,000 assessments had been logged and completed by general surgery trainees and staff.

Fall 2024
Projected launch of 15 core vascular surgery EPAs

2025
Projected launch of EPAS for other ABS specialties including pediatric surgery, complex general surgical oncology, and surgical critical care

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EPAs, continued

Each EPA is extremely detailed in its description, scope and points of evaluation, spanning from Nonoperative/Preoperative to Intraoperative to Postoperative.

Levels of competency within each EPA are based on established frameworks:

Level 1: Limited Participation
Demonstrates understanding of information and has very basic skills. Framework: What a learner directly out of medical school should know.

Level 2: Direct Supervision
Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of the basic case. Framework: The learner can use the tools but may not know exactly what, where, or how to do it.

Level 3: Indirect Supervision
Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case. Framework: The learner can perform the operation in straightforward circumstances.

Level 4: Practice Ready
Can manage more complex patient presentations and operations and take care of most cases. Framework: The learner can treat all straightforward cases and has a strong understanding of surgical options and techniques for less common scenarios.

A competency-based assessment model is now being implemented at all ACGME-accredited general surgery residency programs across the country.

Fetal Surgery training with Dr. Raphael Sun and team

Vascular and Endovascular Surgery Training

Vascular Surgery establishes new integrated residency program

It's been a season of growth for surgery's residencies and fellowships with relatively new fellowships in transplant and hepatobiliary surgery, and gender surgery. Starting this July, vascular surgery will welcome its third resident, Dr. Antoine Pham, as part of the new ACGME-accredited integrated vascular residency.

The new vascular residency is directed by **Enjae Jung, M.D.**, who also directs the vascular surgery fellowship program and has been on faculty with the department since 2014. **Rhusheet Patel, M.D., M.S.**, is the residency assistant program director.

The OHSU Integrated Vascular Residency is a 5-year residency resulting in board eligibility for a primary certificate in Vascular Surgery. The program received accreditation from ACGME in 2022 and in July 2023 welcomed the first two residents, Dr. Asma Mathlouthi (PGY 2) who joined us from UC San Diego and Dr. Eni Nako (PGY 1). OHSU has a long-established and well-respected vascular surgery fellowship program which will be maintained along with the new residency.

The Division of Vascular Surgery, under the new leadership of **Sherene Shalhub, M.D., M.P.H., F.A.C.S., D.F.S.V.S.**, has also had tremendous growth with 14 faculty at OHSU and Portland VAMC, and part time presence at Hillsboro Medical Center and Columbia Memorial Hospital. The fellows and residents rotate at OHSU, Portland VAMC, and Legacy hospitals where they perform large breadth and depth of cases in complex endovascular aortic procedures and lower extremity interventions as well as complex open operations including aortic reconstructions, mesenteric bypasses, and lower extremity bypasses. Trainees also participate in a wide variety of combined surgeries with various other subspecialists to provide anterior spine exposures, porto-mesenteric or caval reconstructions, and arterial reconstruction for oncologic resections.

Despite being a new program, our residents have already presented at regional and/or national meetings and have contributed to peer-reviewed publications.

Torch Tournament Builds Connection

Scalpellex | Incisionarii | Chirurgores | Practuabiles | Cauteris

2024 started off with a bang! Of confetti! On January 8, the Department of Surgery held its inaugural Alliance Assembly for the very first Torch Tournament games – a unique year-long competition within the OHSU surgery community, with 5 established teams and points for everything from acts of kindness to educational involvement, to research accomplishments, to photo challenges.

Since January, more than 100 surgery faculty, trainees and administrators have worked together to rack up points for their respective teams. They've earned prizes and parties along the way, but the ultimate sparring commenced on June 3, 2024 for The Final Games, held in front of Mackenzie Hall. It was a cloudy Monday morning but the rain held off for a campus-wide scavenger hunt, cipher decoding and outsmarting puzzle boxes. The finale was an "organ transplant" relay race with Team Cauteris racing to the finish.

How did the Torch Tournament come about?
The Torch Tournament is so well flushed-out that its initial proposal read like an established framework, something that programs and institutions across the country must surely be already utilizing. Not the case, although perhaps not for long.

Lindsey Loss, M.D., is the mastermind behind the Torch Tournament, a fourth-year resident currently in her research year. She was an intern in 2020 and experienced the challenges and distancing of a Covid residency. She devised the Torch Tournament in 2023, born out of an interest in increasing morale and decreasing burnout via team building and social connection.

Planning is already underway for the 24-25 (full) year of competition and the Alliance Assembly scheduled with the arrival of our new intern class.

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TORCH TEAMS

SCALPELLEX balance, strength, sharp

INCISIONARII cunning, grit, precision

CHIRURGORES courage, skill, compassion

PRACTUABILES dexterity, leadership, levelheaded

CAUTERIS success, determination, empathy

IN MEMORIAM: ROBIN ALTON

A remembrance from Dr. Karen Deveney, Professor Emeritus and surgery residency program director from 1995-2014

Robin Alton (1954-2023) served as the Residency Coordinator in the OHSU Department of Surgery from 2000-2015, a time that was marked by many changes in residency education. Nationally, the 80-hour work week was established as a maximum and skills labs were mandated; at OHSU, the rural surgery rotation at Grants Pass was created. New rules and regulations governing residency programs seemed to pop up every year. Robin was the individual who was in charge of making sure that our program was following the rules, getting all of our many reports to the surgery governing body (ACGME) correct and on time, juggling schedules, and riding herd on the residents to turn in evaluations, op logs, vacation requests, and to complete a myriad of other requirements. She organized the intern interviews. She supervised the ABSITE exam, for which she brought home-made cookies. There was almost always a resident in her office, some to complain, some to cry, and some to just ask for wise counsel. Their secrets were safe with Robin. She could give tough love, but her heart was as big as Portland. She knew all of the residents personally, was their biggest cheerleader, and kept in touch with them after they had graduated. The residents' babies and young children had a "rogue's gallery" of their pictures on Robin's door, a tradition that Erin Anderson has carried on to this day.

Robin was a fount of knowledge about RRC (Residency Review Committee) and ACGME (Accreditation Council for Graduate Medical Education) rules and served as a resource around our campus for other residency coordinators as well as for other surgical programs nationally.

Robin was a graduate of Portland State University (PSU) with honors in English. After graduation she remained at PSU for 8 years in their financial aid department. Thereafter she worked briefly at Marylhurst College and at Bassist, another small local liberal arts college, before coming to work in the Anesthesiology department at OHSU in 1996 as an administrative assistant (AA) to the department. The surgery department "stole" her as an AA two years later, and her superior knowledge and skills as well as problem-solving ability and common sense were quickly apparent. She therefore was promoted to serve as the Residency Coordinator and Education Manager in 2000. In that role no job was beneath her if it needed to be done!

One memorable event occurred in October of 2014 when the department rented an unfurnished duplex for the two surgical residents who were rotating in Coos Bay. Robin and her husband Bruce Boswell travelled with Program Director Dr. Karen Deveney and her husband Dr. Cliff Deveney to Coos Bay in a U-Haul truck full of donated furniture in the pouring rain to move the furniture into the duplex. The embarrassing part of the trip occurred at the onset, when the U-Haul truck became "stuck" in newly recruited Dr. Karen Brasel's driveway – the truck was backed up the steep driveway, a queen bed and mattress were loaded onto the truck, and the truck was unable to be moved. A tow truck had to be called to assist, but was three hours in arriving. The furniture move-in therefore occurred after dark in Coos Bay. Nevertheless, Robin still found the humor in the situation. And Dr. Brasel's driveway still bears the scrape marks of the truck on its cement.

Robin retired in December, 2015. She and Bruce enjoyed many travels together as well as hosting their many friends and family for home-cooked meals. Robin especially loved to bake and sent Bruce to work in the Biochemistry and Molecular Biology lab at OHSU every week with freshly baked cookies or other delicacies for the research staff in the lab. She had always enjoyed gardening and, after retiring, embarked on an ambitious makeover of their garden. Robin loved animals and provided loving care for as many as five cats and dogs at any given time. Unfortunately, Robin's retirement was cut short by cancer. She died in late November, 2023. On April 19 she would have celebrated her 70th birthday.

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For previous issues of *On the Cutting Edge*,
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