Honors and Awards

Faculty

The Crash Injury Research & Engineering Network (CIREN) recently received its 20th year of consecutive funding from the National Highway Traffic Safety Administration. CIREN is a collaborative network of ten centers working to improve automotive design through detailed reconstruction of motor vehicle crashes and the evaluation of resulting injuries in patients. Dr. Eileen Bulger, Professor in the Division of Trauma, Burns, and Critical Surgery, has been the Principal Investigator on the project for the last 9 years, and during this time her team at the Harborview Injury Prevention & Research Center (HIPRC) has been involved in several multidisciplinary research collaborations and publications which have ultimately led to regulations improving passenger safety. Currently the group is focusing on the role of advanced automatic crash notification systems in predicting the severity of injury and the need for extrication so that these data can be better integrated into 911 dispatching protocols. The team is collaborating with King County Emergency Medical Services (EMS) and the local 911 dispatch centers to collect data from patients involved in these crashes and coordinate the flow of information to EMS providers and determine its impact on triage decisions. **Rob Kaufman**, Senior Research Scientist Engineer in Department of Surgery, has been the project manager and crash investigator for the entire period of grant funding.

Dr. Heather Evans, Associate Professor in the Division of Trauma, Burn, and Critical Care Surgery, was awarded $50,000 from the Patient Safety Innovations Program (PSIP) for her initiative, "Piloting a Mobile Health App for Post-discharge Surgical Site Monitoring." The goal of the project is to evaluate the effectiveness of implementing mPOWEr, a mHealth post-discharge solution for surgical wound monitoring and facilitated patient-provider communication in UW Medicine surgical clinics. The proposal will focus on improving communication and care processes in the pre-discharge setting and set the stage for patient-centered care throughout the post-discharge period, when more than 50% of surgical site infections occur. In addition, this project will establish metrics for analysis of mPOWEr's acceptability, utilization and effectiveness. At the conclusion of this project, Dr. Evans and her team at the Surgical Outcomes Research Center (SORCE) will have established an implementation template for future expansion of mPOWEr, aiming to extend this post-discharge SSI monitoring tool as a quality improvement activity across surgical clinics within the UW Medicine Accountable Care Organization.

Dr. David Flum, Professor in the Division of General Surgery, was awarded $2,445,560 from the Agency for Healthcare Research and Quality (AHRQ) for his project "Developing Design Principles to Integrate PROs into clinical practice through HIT: Data, user experience, and workflow requirements for PRO Dashboards." Effectively integrating patient-reported outcome (PRO) information into clinical care through health information technology (HIT) has the potential to improve care delivery and quality, yet many healthcare practitioners have little experience interpreting PROs or incorporating them into healthcare activities. Utilizing systems engineering methods, human-centered design, and mixed-method approaches, this study will assess healthcare practitioner (physicians, physician assistants, advanced practice providers, nurses, and allied health professionals) perspectives and workflow needs to inform design principles for the meaningful integration of PROs into clinical practice through HIT platforms. Dr. Flum is joined on the project by Danielle Lavallee, PharmD, PhD, Research Assistant Professor in the Division of General Surgery, as well as co-investigators from the Department of Urology, The Information School, and others.

Dr. Flum was also awarded $2,774,603 from the National Institutes of Health (NIH) for his project "Practice Patterns and Impact of Operative and Non-operative Management of Diverticulitis." Half of all Americans over the age of 60 have diverticulosis of the colon, and 20-25% are expected to develop acute diverticulitis. While most acute episodes resolve with antibiotics alone, 10-20% will need an emergency colectomy/colostomy at their initial presentation, and all patients remain at lifetime risk for recurrent episodes. Given the uncertainty of when a recurrent episode will occur and the looming risk of colostomy, surgeons have been trained to recommend elective, "prophylactic" colectomy after two episodes, and as a result diverticulitis is now one of the leading reasons for elective colectomy. Several professional societies now recommend delaying elective resection and have called for research to determine its value, yet over the last decade the use of elective resection has increased more than 50%, much faster than the incidence of diverticulitis and coinciding with the widespread adoption of laparoscopy. Given this trend, it is important to assess the patterns of practice related to early or delayed resection, factors driving decision making, and the impact of the disease on those who do and do not have an elective resection. To address these issues, Dr. Flum and his multidisciplinary team, including co-investigators Giana Davidson, MD, MPH, Assistant Professor in the Division of General Surgery, and **Danielle Lavallee**, PharmD, PhD, Research Assistant Professor in the Division of General Surgery, will undertake three related, but independent studies that describe treatment patterns after recovery from an episode of

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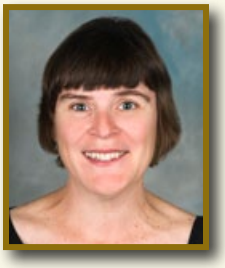
acute diverticulitis, the factors associated with early and delayed elective surgery, and outcomes and impact of the disease. Together these studies will determine if the observed, dramatic increase in the use of elective surgery for diverticulitis is consistent with recommendations about delayed intervention, provide better understanding about the factors associated with decisions for elective surgery and provide critical information about the impact of diverticulitis.



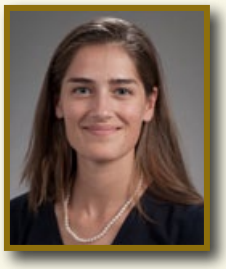
Anne Hocking, PhD, Research Associate Professor in the Division of Trauma, Burn, and Critical Care Surgery, was awarded $35,000 from the University of Washington Royalty Research Fund for her project "Mapping wound metabolism in a mouse model of type 2 diabetes." Chronic non-healing wounds are a common and debilitating complication of diabetes mellitus, and an estimated 25% of patients will develop a non-healing foot ulcer. Of these, 12% will require a lower extremity amputation. Given that the World Health Organization estimates that 347 million people worldwide have diabetes mellitus, the prevalence and incidence of non-healing foot ulcers constitutes a global healthcare crisis. Currently, there is a lack of reliable therapies for treatment of wounds that are slow to heal; consequently there is an urgent need for basic research into fundamental mechanisms of wound repair. The goal of Dr. Hocking's study is the generation of a "road map" of cellular metabolism in a cutaneous wound. While cellular metabolism is known to play a central role in regulating cell signaling pathways critical for cell survival, and proliferation in cancer, less is known about its role in wound healing. In her study, Dr. Hocking will use targeted metabolomics to measure metabolites in diabetic and non-diabetic murine wounds. She will also determine when and where metabolic enzymes are expressed during wound repair. Together these studies will determine whether distinct metabolic programs are associated with different phases of wound repair, and whether wounds with impaired healing are associated with different metabolic programs than wounds with normal healing. Metabolomic studies such as these have the potential to identify novel biomarkers and therapeutic targets for improved wound healing outcomes.

Dr. **Carlos Pellegrini**, *The Henry N. Harkins Professor & Chair*, was named Contributing Foreign Member by the **Royal Academy of Medicine—Spain**.
View the video (in Spanish) >>

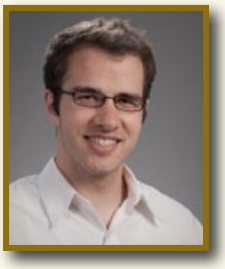
Dr. **Sherene Shalhub**, Assistant Professor in the Division of Vascular Surgery, received the UW Medicine PRAISE award for the period of July–December, 2014. PRAISE stands for Patient Reported Assessment In Satisfaction and Excellence. The awards are given out semi-annually to clinicians who have received at least 15 patient satisfaction surveys in the past 6 months and achieve a ranking for communication in the 80th percentile or better. Clinicians with this ranking are among the top in the nation for their listening and communication skills.

Residents

Research residents Drs. **Lacey LaGrone** and **Brodie Parent** will lead a $50,000 project funded by the **Patient Safety Innovations Program (PSIP)**. The project, "Standardized Verbal Hand-off in the ICU: Decreasing Patient Care Errors through Communication Optimization," will be overseen by Principal Investigators Drs. **Joseph Cuschieri**, Professor in the Division of Trauma, Burn, and Critical Care Surgery, and Patricia Kritek, Associate Professor in the Department of Medicine. In response to unacceptably high numbers of adverse events attributable to communication, and in particular handoff failures, the ACGME and the Joint Commission now require use of standardized handoff procedures. **I-PASS** stands for Illness severity; Patient summary; Action list; Situation awareness and contingency planning; and Synthesis or read-back.



LaGrone



Parent

It is a verbal handoff curriculum which, in previous studies, has resulted in a 23% decrease in adverse events. For their project, the team will roll out the I-PASS curriculum to UWMC and HMC ICUs in a step-wedge, randomized controlled design. Outcomes to be examined include subjective measures of provider perception of handoff quality, and several objective measures of patient quality care including medication errors, length of stay, return to ICU, and mortality. The team anticipates that implementation of the I-PASS curriculum will be sustainable through existing continuing education measures and will improve patient safety and quality care through reduction in medical errors.