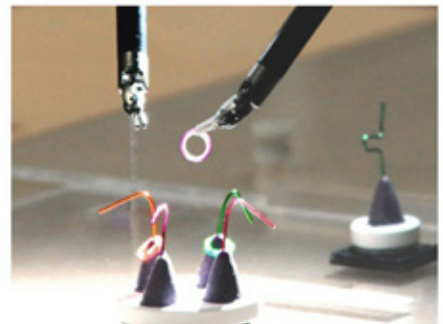
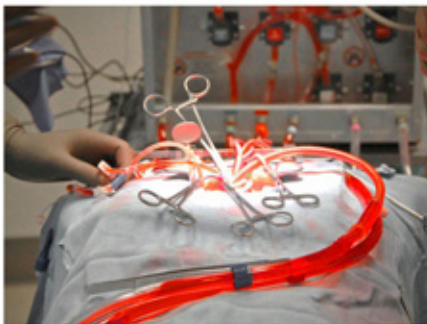
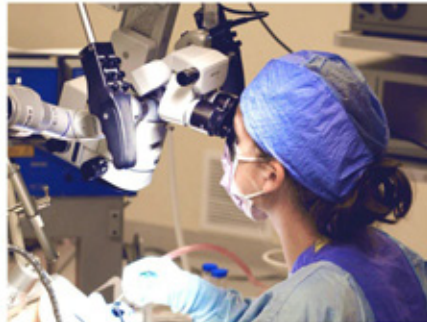


2011 – 2012 Annual Report



INSTITUTE FOR SIMULATION AND INTERPROFESSIONAL STUDIES
AT THE UNIVERSITY OF WASHINGTON

<http://isis.washington.edu>



Highlights: July 1, 2011 – June 30, 2012

2011

- July** CVC Training for all incoming residents
Northwest Hospital Executive Leadership tours ISIS
- August** ISIS hosts tour for Congressional Staffers representing Congressman Dicks, Senator Begich, and Senator Crapo
ISIS hosts tour for Michelle Tranquilli, Legislative Aide to Congressman Reichert
- September** ISIS participates in NCLS Meeting- Cardiology: Past, Present, Future
Dawg Daze attendees tour ISIS
ISIS participates in Community Internship Program
Leadership from Datta Meghe Institute of Medical Sciences (located in Maharashtra, India) visits ISIS
- October** HealthPact TeamSTEPPS Training Course
ISIS Annual Board Meeting
- November** ISIS hosts tours for Seattle Academy of Arts and Sciences, UW Pre Medical Undergraduate Students, and SORCE: Surgical Outcomes Research Center
- December** Alaska Airlines Executive Leadership tours ISIS
HealthPact TeamSTEPPS Training Course

2012

- January** ISIS hosts UW Teaching Scholars course and tour
- February** ISIS participates in Mini Medical School
ISIS staff member receives nomination for UW Distinguished Staff Award
HealthPact TeamSTEPPS Training Course
- March** National TeamSTEPPS Master Training Course
UW Teaching Scholars tour ISIS
- April** Thai Health Officials tour ISIS
- May** Wings of Karen Foundation tours ISIS
National TeamSTEPPS Master Training Course
- June** HMC Community Internship Program
ISIS UW's largest Interprofessional Healthcare training session (Macy Foundation)
TeamSTEPPS Training for all incoming residents

The Institute for Simulation and Interprofessional Studies
University of Washington

Annual Report 2011 – 2012



<http://isis.washington.edu>

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AMERICAN COLLEGE OF SURGEONS • DIVISION OF EDUCATION
ACCREDITED EDUCATION INSTITUTES
ENHANCING PATIENT SAFETY THROUGH SIMULATION



The American Congress of
Obstetricians and Gynecologists
WOMENS HEALTH CARE PHYSICIANS



American Society of Anesthesiologists
Endorsed Program
Simulation Education Network

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From the Chairman of the Board



Carlos A. Pellegrini, M.D.
ISIS, Chairman of the Board

The Henry N. Harkins
Professor and Chairman
of Surgery

The Institute for Simulation and Interprofessional Studies (ISIS) has had yet another noteworthy year. Since its opening in 2005, ISIS has been a regional and national leader in utilizing simulation to improve the quality training for healthcare professionals. This leadership position arises from the unique way in which ISIS unites the latest technologies in the field with simulation expertise of UW faculty from an extensive array of specialties and disciplines. Such combination results in innovative uses of simulation technologies to improve the quality of education for students, residents, fellow, faculty and staff affiliated with UW Medicine. Additionally, this combination contributes to the success of the paradigm shift towards relying on simulation as a key component of educating healthcare professionals. By improving the quality of training for students, faculty and staff, ISIS profoundly improves clinical care at UW Medicine.

In its seventh year of operation, ISIS continues to serve as both a training facility and a center for simulation knowledge, expertise and resources for all programs across UW Medicine. Since its founding, ISIS has expanded its reach outside the School of Medicine to train healthcare students and professionals from numerous backgrounds, such as Pharmacy, Nursing, and Physician Assistants, in addition to staff of hospitals affiliated with UW Medicine. Within ISIS' simulated learning environments, students and healthcare professionals gain improved medical and procedural knowledge, in addition to interpersonal skills and interprofessional communication. This diversity in training foci enables ISIS to address a wide spectrum of skills and knowledge needed to produce the highest quality clinical care, and to do so in a cost-effective manner.

ISIS' two primary locations are in the Surgery Pavilion at the University of Washington Medical Center and in the Ninth and Jefferson Building at Harborview Medical Center. Additionally, ISIS utilizes telemedicine to extend its reach regionally to WWAMI sites such as the Boise VA. In Fiscal Year 2012, ISIS formalized collaboration with Seattle Children's simulation program. Under this

new arrangement, faculty of the School of Medicine working at Seattle Children's provide simulation training to students, trainees, and faculty at Seattle Children's Learning and Simulation Center under ISIS oversight. In addition, Children's Learning Center develops a number of hospital-specific simulation training curricula that address safety and quality at Seattle Children's. ISIS continued to partner with Harborview Medical Center's Clinical Education and Community Training Center. With the expansion of UW Medicine to Northwest Hospital and Valley Medical Center, ISIS is currently undergoing in-depth discussions to develop full integration of these facilities into ISIS so that ISIS may better serve the training needs of healthcare professionals at all UW Medicine hospitals. Such expansion of ISIS has led to a steep increase in trainees and learner hours.

In addition to having a successful year with its educational opportunities, ISIS has had a successful year with research. Since 2009, ISIS has received over \$7.8M through Congressional Grant Funding, in which the University of Washington collaborates with Madigan Army Medical Center in the development of distributed skills training, individual healthcare provider training programs and team training with continuity of care. Other noteworthy research projects through ISIS include Dr. Rosemarie Fernandez' AHRQ grant, "Improving Patient Safety through Leadership and Team Performance in Simulations," Dr. Brenda Zierler's interprofessional team training grants through the Josiah Macy Jr. and Hearst Foundations, and Dr. Tom Lendvay's "Virtual Reality Warm-Up for Robotic-Assisted Surgery," to name a few. The diversity in its research projects enables ISIS to produce and disseminate scholarly work applicable to an extensive audience.

Another highlight from FY12 is the finalized recruitment of Sara Kim, PhD, to serve as the ISIS Director of Education Innovations and Strategic Programs. In this position, Dr. Kim will lead the development, implementation, and evaluation of educational programs and projects designed to promote the highest quality education for learners in ISIS. Dr. Kim's curricular expertise in clinical skills development, interprofessional communication, electronic and simulated clinical case development and other emerging areas will augment ISIS' educational and research opportunities, in addition to bridging ISIS with collaborators around the region.

As one can see, this year has been one of expansion for ISIS — with its educational offerings, physical locations, research projects, and personnel. Such growth signifies the increasing success of, and reliance upon, ISIS to further UW Medicine's commitment to provide the highest quality education, research, and patient care.

Sincerely,

A handwritten signature in black ink, appearing to read "Pellegrini". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

Carlos Pellegrini, MD, FACS, FRCSI (Hon.)

Letter from the Executive Director



Brian Ross, Ph.D., M.D.
ISIS, Executive Director

Professor, Anesthesiology
Adjunct Professor,
Medical Education and
Bioinformatics

Seven years - Can you believe it has been seven years since this incredible journey was first undertaken? Over the past seven years I have frequently commented on the continued growth and expansion of the ISIS program. While the phenomenal growth continues to astound me, it is the increasing diversity of innovation, quality of programs, and the breadth of research that highlights the work of ISIS. This emphasis on quality is evident this past year not only through the expanded focus that ISIS has given to interprofessional education and team communication, but also in hospital presence and patient safety improvements brought to ISIS as well.

Leadership in the School of Medicine, as well as those directing ISIS, continue to recognize the growing role of simulation in healthcare education, particularly on modes of education that move us out of our uniprofessional methodology towards an interprofessional team-based approach to healthcare. Through ongoing research, both internally at the University of Washington and nationally through the Joint Commission and Agency for Healthcare Research & Quality, it has become evident that interprofessional teamwork and communication is at the forefront of simulation education and improved patient outcomes.

ISIS, in conjunction with leadership from the University of Washington Medical Center, Harborview Medical Center, and Northwest Hospital and Medical Center, have provided training and implementation support for Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) initiative across UW Medicine entities. The program, developed by the Department of Defense and the AHRQ (Agency for Healthcare Research & Quality), a branch of the U.S Department of Health & Human Services, targets patient outcomes by improving communication and teamwork skills among healthcare professionals. ISIS, now entering its fourth year as a National Training Center for the National Implementation of

TeamSTEPPS, considers itself privileged to provide regular Master Training courses for regional, national, and international healthcare providers and educators.

Further expanding interprofessional training opportunities, ISIS hosted, for the third year in a row, healthcare professional students for a week of immersive Team-Based Interprofessional Training Simulations (Team-BITS) in the areas of Adult, Pediatric and OB/GYN Acute Care (June 2012). This program is a continuation of the interprofessional pilot program originally funded by grants from the Josiah Macy Jr. and Hearst Foundations (totaling more than \$1 million over 3 years) to develop an interprofessional curriculum for students based on the TeamSTEPPS models of effective communication for which I serve as Co-PI with Dr. Brenda Zierler. The weeklong program touched more than 300 learners from the Schools of Medicine, Nursing, Pharmacy, and MEDEX program. Jointly coordinated by faculty from each of these schools/programs, the overall Team-BITS program, with its focus on team communication and role identification, has become a perennial favorite amongst students.

Throughout the next year, ISIS looks forward to expanding its interprofessional training focus to Northwest Hospital and Medical Center's Community Health Education and Simulation Center (CHESC). The newest addition to the ISIS umbrella, the state-of-the-art facility, complete with its own Easy Street real-world simulation environment, and led by Janine Buis RN, BSHCA, MBA, provides a centralized hands-on venue for health education and rehabilitation to both healthcare professionals and the general public.

One of the services that ISIS shares with the UW Health System, and complemented by the addition of CHESC, is its commitment to community outreach. For me, nothing is more satisfying than seeing eager young students from area middle and high schools experience the ISIS program and become excited about a career in healthcare. This past year, ISIS hosted over 1,190 students from regional science and healthcare classes.

ISIS continues to advance the development of new curricula, the expansion of staff and the development of highly collaborative alliances with other educational and healthcare delivery systems at the local, national and international levels.

Entering its eighth year, the Institute for Simulation and Interprofessional Studies continues to look for opportunities to set the standard for simulation education.

With Best Wishes,

A handwritten signature in black ink that reads "Brian K. Ross MD". The signature is written in a cursive, flowing style.

Brian K. Ross, PhD, MD

Mission Statement

The primary goal of the Institute for Simulation and Interprofessional Studies (ISIS) is to provide leadership in the use of simulation technologies to improve the quality of healthcare education and improve patient safety and outcomes. ISIS will seek highly collaborative alliances in selected projects with other educational and healthcare delivery systems with similar interests in simulation. The primary impact of ISIS will be upon the citizens of the State of Washington and the greater WWAMI region. Through its research and education efforts and publication of results, ISIS will also have a strong influence and potential impact upon providers and patients in a global fashion.

Training

ISIS seeks a reputation for excellence in curriculum delivery and research and development. ISIS serves dual roles: as a training center for a wide spectrum of skills including procedural and patient management skills, as well as a simulation resource center for the UW Medicine Health System by providing simulation expertise and managing simulation assets. In FY12, ISIS completed 1,442 training activities, reaching 12,764 participants logging a total of 54,087 learner hours (totaling 126,518 learner hours since 2006).

UWMC			
Type of Activity	# of Activities	Total Learners	Learner Hours
Total Courses	778	3,686	12,818
CVC Testing	122	122	61
EVATS	172	-	495
HMC			
Type of Activity	# of Activities	Total Learners	Learner Hours
Total Courses	533	7,232	37,347
CVC Testing	116	116	58
Clinical Education	70	1,662	11,327
Community Training Center	52	1,077	7,129
BOISE VA			
Type of Activity	# of Activities	Total Learners	Learner Hours
Total Courses	66	383	1,889
ALL ISIS FACILITY ACTIVITIES			
Type of Activity	# of Activities	Total Learners	Learner Hours
Total Courses	1,380	11,406	52,683
CVC Testing	236,	236	118
Clinical Education	67	1,662	11,327
Community Training Center	52	1,077	7,129
EVATS	172	-	495
Demos/Outreach/Tours	62	1,358	1,404
TOTAL ACTIVITIES	1,442	12,764	54,087

Learners

Healthcare Professional Training

While the majority of ISIS' trainees are from the School of Medicine, ISIS provides training sessions for nurses, nursing students, respiratory therapy students, pharmacy students, physician assistant students, midwives, paramedics and other healthcare professionals from the University of Washington Medical Center, Harborview Medical Center, surrounding hospitals, and from throughout the region. ISIS partners with nursing personnel at the UW Medical Center to provide trainings such as orientations for new nurses, in-situ trainings, and procedural-focused trainings such as Procedural Sedation training. Additionally, ISIS partners with Harborview Medical Center's Clinical Education and Community Training Center to provide simulation opportunities for hospital nurses and staff. This diversity provides the University of Washington with a truly unique and versatile simulation program.

Medical Student Training

Medical students participate in ISIS skill training sessions during clinical rotations, taking courses such as: Introduction to Anesthesiology, OB/GYN Dry Lab, Surgical Skills, and Internal Medicine Basic Airway courses. Additionally, ISIS offers medical students and new graduates the opportunity to participate in interprofessional team training simulations, which combine students from medicine, pharmacy, nursing, and physician assistant programs into patient care teams.

In addition to clerkship-based trainings in ISIS, medical students at the end of their second and fourth years of training participate in "Transition to Clerkship" and "Transition to Residency" capstone courses. These trainings consist of both hands-on skill stations and interprofessional team training sessions. Events such as Team-BITS highlight ISIS' truly interprofessional training program, and substantiates ISIS' reputation as a national leader in interprofessional education.

Resident and Physician Training

Training in ISIS has become a staple of many residency programs at the University of Washington. There are regularly scheduled skills-based classes for residents and attending physicians from departments such as: Anesthesiology and Pain Medicine, Cardiothoracic Surgery, General Surgery, Emergency Medicine, Family Medicine, Cardiology, Gastroenterology, General Internal Medicine, Obstetrics and Gynecology, Neonatology, Nephrology, Neurological Surgery, Ophthalmology, Orthopaedics and Sports Medicine, Otolaryngology, Pediatrics, Pulmonary and Critical Care, Plastic Surgery, Radiology, Urology and Vascular Surgery.

Community Outreach

ISIS supports a dynamic outreach program to middle and high school students, in addition to college students with an interest in the health sciences. Such community outreach is a cornerstone of ISIS' mission to provide hands-on healthcare training to a diverse audience of individuals, both within the University of Washington and to the broader community. Additionally, ISIS participates in Dawg Daze for UW undergraduate students, Harborview's Community Internship Program, and Mini-Medical School which is open to the public.

Accreditation

ISIS is proud to be accredited by the American College of Surgeons (ACS) as a Level I Comprehensive Education Institute, completing its reaccreditation cycle in June 2012. In 2011, ISIS became one of nineteen centers certified by the American Congress of Obstetricians and Gynecologists (ACOG) with the goal of providing access to simulation training for residents at ACGME-accredited programs. Since 2010, ISIS has also maintained its certification as an Endorsed member of the Simulation Education Network for the American Society of Anesthesiology (ASA), thus enabling ISIS to provide Maintenance of Certification for Anesthesiology (MOCA) credited courses. Physicians requiring recertification by the American Board of Anesthesiology (ABA) may attend one of ISIS' nationally publicized courses to meet the needs of their ABA requirements.

Affiliated Organizations

ISIS collaborates regularly both within the UW Medicine system as well as with external partners across the region. In 2011, ISIS finalized a Memorandum of Understanding (MOU) with Seattle Children's Hospital to formalize a partnership of simulation support. In addition, ISIS is currently working to finalize its MOU with Northwest Hospital and Medical Center to partner more closely with Northwest's Community Health Education and Simulation Center.

ISIS also maintains signed Memorandum of Understandings (MOUs) with the Centre of Excellence for Surgical Education and Innovation (CESEI) at the University of British Columbia (Vancouver, BC), the Simulation and Clinical Learning Center at Oregon Health and Science University (Portland, OR) and with the Andersen Simulation Center at Madigan Army Medical Center (Tacoma, WA). ISIS is currently developing an MOU with the Center for Advanced Medical Learning and Simulation (CAMLs) (Tampa, Florida). ISIS anticipates formalization of the agreement in FY13.

Pacific Northwest Healthcare Simulation Collaborative

With ISIS as a founding member, the Pacific Northwest Healthcare Simulation Collaborative (PNWHSC) was developed in 2009 as a collaborative of educators and stakeholders from hospitals, schools, and industry. The organization aims to combine simulation training and technology into the advancement of healthcare education.

PNWHSC Mission Statement

The Pacific Northwest Healthcare Simulation Collaborative shares individual expertise, techniques, tools and resources in simulation training. They are comprised of educators, practitioners, researchers and stakeholders from schools of nursing and medicine, hospitals, and industry. PNWHSC members strive to integrate and expand simulation training and technology into healthcare education for enhancing the competencies and confidence of healthcare providers. Our purpose is to improve patient safety and save lives in our communities.

Members of the ISIS team continue to provide leadership support to the Pacific Northwest Healthcare Simulation Collaborative (PNWHSC) with members of simulation centers from throughout Washington State. Since its formation in 2009, the collaborative has grown to over 115 active members from 37 hospitals, colleges, and industry partner sites. The most exciting development of the past year may be the partnership with PNWHSC and American Medical Response. In 2011, American Medical Response donated a mobile ambulance unit for PNWHSC use. The ambulance will be available 24/7 to members of the collaborative for rural training outreach and on-the-road simulation efforts.

In addition to the acquisition of a mobile training unit, the collaborative has continued to establish itself among other regional simulation groups as a leader in healthcare education through alliances with the Oregon and Idaho's simulation networks. In the coming year, PNWHSC aims to host its first collaborative symposium with attendees invited from across the country.

PART OF THE MISSION OF ISIS AND AFFILIATED SIMULATION CENTERS IS TO PROVIDE COMMUNITY OUTREACH. IN THIS PHOTO, AN EMS PROVIDER ATTENDS TO A SIMULATED PATIENT JUST REMOVED FROM A CAR AT NORTHWEST HOSPITAL & MEDICAL CENTER'S SIMULATION LAB.



Governance

Board of Directors

ISIS is governed by a Board of Directors appointed by Dr. Paul Ramsey, MD, CEO, UW Medicine, Executive Vice President for Medical Affairs, and Dean of the School of Medicine at the University of Washington. The Board is comprised of representative member of the UW Medicine Health System and are advocates of the mission and goals of ISIS. Members of the Board of Directors for FY12 were:

William Bremner, MD, Chair, Department of Medicine

John Clark, PhD, Chair, Department of Biological Structure

Ellen Cosgrove, MD, Vice Dean of Academic Affairs, UW School of Medicine

Richard Ellenbogen, MD, Chair, Department of Neurological Surgery

David Fisher, MD, ISIS Seattle Children's Executive Representative; Senior Vice President and Medical Director, Seattle Children's Hospital

Margaret Gilshannon, MHA, ISIS Administrative Director; Director of Finance and Administration, Department of Surgery

Cindy Hecker, BSN, Senior Associate for Clinical Operations/Integration for UW Medicine (As of September 2012: Interim Executive Director for Northwest Hospital and Medical Center)

Byron Joyner, MD, MPA, Associate Dean for Graduate Medical Education, UW School of Medicine; Professor, Department of Urology

Carlos Pellegrini, MD, FACS, FRCSI (Hon.), ISIS Board Chairman; Chair, Department of Surgery

Paul Ramsey, MD, Dean, UW School of Medicine, CEO, UW Medicine, Executive Vice President for Medical Affairs, and Dean of the School of Medicine, University of Washington

Lawrence Robinson, MD, Vice Dean, Clinical Affairs and Graduate Medical Education, UW School of Medicine; Professor, Department of Rehabilitation Medicine

Brian Ross, PhD, MD, ISIS Executive Director; Professor, Department of Anesthesiology and Pain Medicine

Michael Ryan, MD, Associate Dean for Curriculum, UW School of Medicine; Associate Professor, Department of Medicine

Richard Satava, MD, FACS, ISIS Senior Executive Advisor; Professor, Department of Surgery

Debra Schwinn, MD, Chair, Department of Anesthesiology and Pain Medicine

Mika Sinanan, MD, PhD, ISIS Chair, Research and Development Committee; Professor, Department of Surgery; President, UW Physicians

Johnese Spisso, RN, MPA, Chief Health Systems Officer, UW Medicine, Vice President for Medical Affairs, UW Medicine

F. Bruder Stapleton, MD, Chair, Department of Pediatrics

Peter Tarczy-Hornoch, MD, Acting Chair, Department of Medical Education & Biomedical Informatics

Eileen Whalen, RN, MHA, ISIS HMC Executive Representative; Executive Director, Harborview Medical Center Administration

Stephen Zieniewicz, FACHE, ISIS UWMC Executive Representative; Executive Director, University of Washington Medical Center Administration

Brenda Zierler, PhD, RN, FAAN, Associate Director of ISIS, Professor, Biobehavioral Nursing and Health Systems

ISIS Executive Committee

Margaret Gilshannon, MHA, Committee Member

During FY12, Ms. Gilshannon served as the Director of Finance and Administration for the Department of Surgery and as the ISIS Administrative Director. She oversees all budgetary and operational decisions related to ISIS. Additionally, Ms. Gilshannon manages all other operational and financial resources within the Department of Surgery. Previously, Ms. Gilshannon has held other leadership roles at UW Medicine, including Associate Director of the Department of Surgery, Administrator of the Department of Plastic and Reconstructive Surgery, and Director, Clinical Systems Development.

Ms. Gilshannon holds a Masters of Health Services Administration from the University of Washington and an undergraduate degree in English from Lawrence University in Appleton, WI. She is a member of the American College of Healthcare Executives and serves on the Board of the Association of Academic Surgical Administrators. Ms. Gilshannon left the Department of Surgery at the end of FY12 and was replaced by Ms. Susan Marx who assumed the position of Acting Director in August of 2012.

Cynthia Hecker, BSN, Committee Member

From November 2011 to September 2012, Ms. Hecker served as the Sr. Associate for Clinical Operations/Integration for UW Medicine. Ms. Hecker's responsibilities involve working across the system with all levels of administrative and physician leadership on standardization and integration initiatives. Her primary focus this last year has been working with Northwest Hospital, integrating systems and programs with UW Medicine.

Prior to assuming her present role, Ms. Hecker held the position of Chief Nursing Officer and Senior Associate Administrator for In-Patient Operations for Harborview Medical Center for twelve years. In this role, she was responsible for Nursing Practice throughout Harborview along with operational responsibilities for all key in patient clinical services which include Critical Care, Acute Care, Rehabilitation, Psychiatry, Surgical Services, Radiology, Emergency, Laboratory and Pharmacy. In addition to her duties at Harborview, Ms. Hecker also held the role of Assistant Dean for Clinical Practice at the University of Washington's School of Nursing.

Ms. Hecker began her career at Harborview Medical Center in January of 1981 after graduating from the University of Washington School of Nursing. Ms. Hecker held clinical positions in acute care and critical care before moving into management. Her background in hospital operations and her understanding of UW Medicine have prepared her for her Clinical Operations/Integrations position.

In 2009, Ms. Hecker received the University's School of Nursing's Distinguished Alumni Award, recognizing her leadership achievements over the past thirty years.

In September 2012, Ms. Hecker was appointed Interim Executive Director for Northwest Hospital & Medical Center.

Byron Joyner, MD, MPA, Committee Member

Dr. Joyner is Professor and Residency Program Director in the Department of Urology and Associate Dean for Graduate Medical Education at the University of Washington.

Dr. Joyner graduated from Princeton University and received his medical degree from Harvard Medical School in Boston, Massachusetts. He completed his residency at Massachusetts General Hospital and performed a research fellowship at the Boston Children's Hospital. He had an additional two years of pediatric and reconstructive urology training at the Hospital for Sick Children in Toronto, Canada. He has been on faculty at the Seattle Children's Hospital since 2001 after a four-year commitment in the US Army where he was chief of pediatric urology at Madigan Army Medical Center. Most recently, Dr. Joyner received a Master in Public Administration, which he felt organized many of his principles of leadership.

Besides his interest in resident and fellow education, Dr. Joyner has interests in clinical research related to voiding dysfunction and urinary tract infections in children. He

is a Fellow of the American Academy of Pediatrics and the American College of Surgeons. He is an active member of many urological societies including the American Urological Association, the American Academy of Pediatrics, the Society of University Urologists, and the American College of Surgeons.

Dr. Joyner's passion is learning of and designing better ways to improve graduate medical education (GME). He is responsible for the core curriculum and competency-based training of the urology residents at the University of Washington. He was appointed as the Associate Dean for Graduate Medical Education and oversees the educational learning environment for over 1,200 residents and fellows in 92 different training programs at the same institution.

His training in the UW Teaching Scholar's program has allowed him to create new approaches to teaching residents about interpersonal and communication skills and professionalism. In fact, his efforts have been rewarded with the Julian S. Ansell Teaching award which he won in 2005. Besides the more than 40 scientific articles he has published, he has recently written some of the seminal articles for urology in the field of graduate medical education and continues to champion better ways to improve doctors and doctoring.

Farrah Leland, JD, Committee Member

Ms. Leland currently serves as the Administrator of ISIS, and in this role, she oversees day-to-day activities, staff, budgetary decisions, and all other operational management. She ensures that ISIS activities are in compliance with University policy, including working with School of Medicine Compliance and the Attorney General's office for contract/agreement negotiation. Additionally, Ms. Leland develops, plans, and oversees special events and projects to promote ISIS internally within the University of Washington, and externally with industry partnerships. She develops and writes policies and procedures for ISIS. Ms. Leland participates in Harborview Medical Center's Department Managers' Committee, and University of Washington Medical Center's Leadership Council. She's also a member of the American College of Surgeons' Accredited Education Institutes' Administration and Management Committee.

Ms. Leland has a Juris Doctorate from Gonzaga University, and in 2007, she was admitted to the Washington State Bar Association. Additionally, she has an undergraduate degree in Cell and Molecular Biology from the University of Washington.

Thomas Lendvay, MD, Committee Member

Dr. Lendvay is an Associate Professor of Urology. In 1995, he received his B.A. in German and Biology from Rice University in Houston, TX. He then earned his MD at Temple University in 1999. Dr. Lendvay completed his Surgical Internship and Urologic Residency training at Emory University in 2004. Following his internship, he pursued a two year fellowship in Pediatric Urology at Seattle Children's Hospital through the University of Washington. Dr. Lendvay has been a member of the University of Washington faculty since 2005.

Dr. Lendvay is focused on improving patient outcomes through advanced surgical education training methodologies. Through his membership in the Biorobotics Lab in the Department of Electrical Engineering, his Co-Directorship of the Seattle Children's Hospital Robotic Surgery Center and his role as Urology Program Delegate at Seattle Children's Hospital, he brings a unique perspective to simulation education. In 2011, Dr. Lendvay was appointed by Dr. Pellegrini to serve as a member of the ISIS Executive Committee in 2011.

Dr. Lendvay has obtained extramural federal funding through the Department of Defense to explore the role of surgical warm-up in robotic surgery skills performance. In addition, he is a Co-Founder of Spi Surgical, Inc. which is developing novel neurosurgical and skull-based robotic surgery platforms as well as automated surgical performance feedback platforms capable of providing users with real-time assessments of their surgical skills. He has authored papers regarding the role of robotic surgery in children as well as foundation papers centered on surgical simulation training. He is credited with publishing the first urologic simulation curriculum within

the AAMC sponsored MedEdPORTAL. Nationally, he is involved in drafting the first Basic Laparoscopic Urologic Skills curriculum to be rolled out to every Urology resident in the country and The Fundamentals of Robotic Surgery (FRS), which will provide every learning robotic trainee and practicing clinician with a standardized robotic surgery curriculum and certification test for proficiency in the US.

Paula Minton-Foltz, RN, MSN, Committee Member

Ms. Minton-Foltz has been the Associate Director of Quality and Patient Safety Program Operations since 2008, and a faculty member at the University of Washington School of Nursing. Prior to these roles she has been the advisory board member at the Seattle Pacific University, administrative lead for HMC and UW Medicine TeamSTEPPS initiatives. Additionally, she has lead projects that include nursing research strategies, organization improvement reporting structure and process improvement methodology changes, along with helping reduce hospital acquired infections.

She received her BS in Nursing from University of Evansville in Illinois and her MS in Nursing from Northern Illinois University.

Carlos A. Pellegrini, MD, FACS, FRCSI (Hon.) Committee Chairman

Dr. Pellegrini has been appointed by Dean Paul Ramsey to serve as Chair of the ISIS Board. As part of this commitment, he also chairs the ISIS Executive Committee. Dr. Pellegrini has been a long-standing advocate and champion of simulation training. Early on, he saw the potential benefits of training via simulation and has been involved with the ISIS concept from its inception.

Dr. Pellegrini received his MD in 1971 from the University of Rosario Medical School in Argentina. After training in general surgery in Argentina, he completed a second surgical residency at the University of Chicago. In 1979, he was appointed to the faculty of the University of California San Francisco where he developed and directed a Center for GI motility. An active gastrointestinal surgeon at UCSF, he was recognized on several occasions by residents and students for his teaching.

In 1993 he became Chairman of the Department of Surgery at the University of Washington in Seattle. In 1996, in recognition for his role in the strengthening of all clinical, teaching, and research programs of the Department he became the first holder of the Henry N. Harkins Endowed Chair, honoring the first Chairman of the Department of Surgery at the University of Washington.



ISIS UTILIZES CUTTING EDGE TECHNOLOGY TO IMPROVE MEDICAL EDUCATION AT THE UNIVERSITY OF WASHINGTON.

Dr. Pellegrini is a world leader in minimally invasive gastrointestinal surgery and a pioneer in the development of videoendoscopy for the surgical treatment of gastroesophageal reflux disease and esophageal motility disorders, particularly achalasia. At the University of Washington he developed the Center for Videoendoscopic Surgery, the Swallowing Center, now known as the Center for Esophageal and Gastric Surgery, and the Institute for Simulation and Interprofessional Studies (ISIS). Dr. Pellegrini serves in many of the top leadership positions at the University of Washington. In addition to his role as Chairman of the Board of ISIS, he is a long-time member of the highest decision making bodies at UW Medicine, and Chairs many committees which oversee an array of work including: Continuous Professionalism, Diversity, Executive Search Committees and Oversight of Multidisciplinary Practices.

Dr. Pellegrini serves in the highest leadership positions in many regional, national and international surgical associations. He is the immediate past Chair of the Board of Regents of the American College of Surgeons and immediate past Chair of the American Surgical Association Foundation. He is currently President of the World Organization for Specialized Studies on Diseases of the Esophagus (OESO) and a member of the National Advisory Committee of the Robert Wood Johnson Foundation. In 2005-06 he was President of the American Surgical Association, the oldest and most prestigious organization of surgeons in America. He has been Director of the American Board of Surgery and Chair of the Digestive Disease Week Council. In the area of medical education he has been a major contributor to the fundamental reform of residency work hours, having been a member and chair of the RRC for Surgery. Dr. Pellegrini serves on several editorial boards and publishes regularly in the field of minimally invasive surgery for upper gastrointestinal diseases, esophageal cancer, and related areas, as well as the field of training and new technologies to educate the next generation of surgeons. His bibliography lists more than three hundred articles, chapters, editorials, and books, as well as eleven surgical videos and movies.

Brian K. Ross, PhD, MD, ISIS Executive Director

Dr. Ross is the energy behind the advancement of medical simulation within UW Medicine. His vision has been instrumental in shaping what ISIS is today, and based on his vision and expertise in medical simulation, Dr. Ross was appointed by the Dean of the School of Medicine to serve as the first Executive Director of ISIS. In this role, he serves on the ISIS Board and the ISIS Executive Committee.

Dr. Ross is a UW Medicine professor of Anesthesiology and Pain Medicine. He received his PhD in physiology/pharmacology from the University of North Dakota in 1975 and completed his postdoctoral research in respiratory diseases at the University of Washington in 1979. He earned his MD from the University of Washington Medical School in 1983. In 1986, Dr. Ross completed a research fellowship in Obstetrical Anesthesia from the University of California at San Francisco, and his residency in anesthesiology at the University of Washington in 1987.

Dr. Ross has been a member of the UW School of Medicine faculty since 1987, and in 2003, he was promoted to full professor. In 2007, Dr. Ross was appointed Adjunct Professor to the Department of Medical Education and Biomedical Informatics.

Dr. Ross has been involved in medical simulation at the University of Washington since 1996 when he developed the initial simulation training curriculum for the Department of Anesthesiology.

Richard M. Satava, MD, Senior Executive Advisor

Dr. Satava is a professor of surgery at the University of Washington, and Senior Executive Advisor for ISIS.

Previous positions include Professor of Surgery at Yale University and a military appointment as Professor of Surgery (USUHS) in the Army Medical Corps assigned to General Surgery at Walter Reed Army Medical Center.

Dr. Satava completed his undergraduate training at Johns Hopkins University. He attended medical school at Hahnemann University of Philadelphia with an internship at the Cleveland Clinic. His surgical residency was completed at the Mayo Clinic, culminating with a fellowship of surgical research at the Mayo Clinic.

Dr. Satava has served on the White House Office of Science and Technology Policy Committee on Health, Food and Safety. He is currently a member of the Emerging Technologies and Resident Education Committee and the Informatics Committee of the American College of Surgeons. He is past president of the Society of American Gastrointestinal Endoscopic Surgeons, past president of the Society of Laparoendoscopic Surgeons, and is on the Board of Governors of the National Board of Medical Examiners.

He participates in a number of surgical and engineering societies and is on the editorial board of numerous surgical and scientific journals. He has been continuously active in surgical education

and surgical research, with more than 200 publications and book chapters in diverse areas of advanced surgical technology, including Surgery in the Space Environment, Video and 3-D Imaging, Telepresence Surgery, Virtual Reality Surgical Simulation, and Objective Assessment of Surgical Competence and Training.

During his 23 years of military surgery, he has been an active flight surgeon, an Army astronaut candidate, M.A.S.H. surgeon for the Grenada invasion, and a hospital commander during Desert Storm. While striving to practice the complete discipline of Surgery, he is aggressively pursuing the leading edge of advanced technologies to formulate the architecture for the next generation of medicine.

Mika N. Sinanan, MD, PhD, Chair, Research and Development Committee

Dr. Sinanan's primary role within ISIS is Chair of the Research and Development Committee.

Dr. Sinanan is a professor of Surgery at the University of Washington School of Medicine, and an adjunct professor within Electrical Engineering. He received his MD from Johns Hopkins University in 1980 and completed his residency at University of Washington in 1988. Following residency, he joined the faculty of the University of Washington Department of Surgery. He received his PhD in gastrointestinal physiology in 1991 from the University of British Columbia.

Widely published and recognized as a leader in minimally invasive gastrointestinal surgery, from 1993-2004 Dr. Sinanan served as Co-Director of the Center for Videoendoscopic Surgery at the University of Washington School of Medicine. As Chair of the Surgery Pavilion Project Management Committee, Dr. Sinanan was instrumental in the design and planning of the Surgery Pavilion, which houses one of the ISIS facilities.

Dr. Sinanan's current research interests are in the objective measurement and analysis of surgical performance, surgical simulation, and robotics. He is committed to the advancement of robotic surgery and was the co-investigator of a grant from the Department of Defense, "Studying Mini Robot Design for Military Telesurgery in the Battlefield."

Dr. Sinanan's current positions include Medical Director of the Surgical Specialties Center, and President of University of Washington Physicians. His commitment to quality

improvement has led to a number of patient safety initiatives within the hospital setting, as well as a focus within ISIS on the mission of patient safety. Dr. Sinanan is currently a leader in the development of ISIS' simulation curriculum for Central Venous Line Placement, used for training all UW Medicine healthcare professionals in standardized safety procedures.

Peter Tarczy-Hornoch, MD, FACMI, Committee Member

Dr. Tarczy-Hornoch is a University of Washington Professor of Biomedical and Health Informatics (BHI), and Professor of Pediatrics, Division of Neonatology with an adjunct professorship in Computer Science and Engineering. Since 2011 he has served as Acting Chair of the Department of Biomedical and Health Informatics. He earned his MD from Stanford University School of Medicine in 1989. In 1992 he completed a residency in Pediatrics at the University of Minnesota and in 1995 he completed a fellowship in Neonatology at the University of Washington.

Dr. Tarczy-Hornoch serves a leadership role on a number of research efforts including Director of the Biomedical Informatics Core of the Institute of Translational Health Sciences (local CTSA grant renewed for 5 years Spring of 2012), since 2006, serving as the Director of Research and Data Integration for the UW Medicine clinical computing group including leading the Microsoft Amalga evaluation, acquisition, installation, and deployment. Since the late 90's, Dr. Tarczy-Hornoch has lead a genetic informatics research group which has included 7 years focused on the development of the informatics infrastructure for th GeneTests.org, over 10 years as PI on two R01 grants and co-PI of an NSF grant, and collaborating with Dr. Jarvik since 2008 on the Northwest Institute for Genetic Medicine focusing on extracting phenotypes from the electronic medical record using advanced text mining approaches. Most recently in 2012 he has begun collaboration with Dr. Jarvik on one of the 6 national sites for the National Human Genome Research Institute (NHGRI)'s Clinical Sequencing Exploratory Research doing whole exome sequencing and integrating actionable incidental finding results into the electronic medical record. Since 2011, he has directed the health informatics core on an AHRQ grant focused on integrating clinical data from electronic medical records from twelve hospitals in Washington.

Dr. Tarczy-Hornoch has been a member of the University of Washington School of Medicine faculty since 1995. He was promoted to full Professor in 2006.

Eileen Whalen, MHA, RN, Committee Member

Ms. Whalen, MHA, RN was named as the new Executive Director for Harborview Medical Center, in 2008. In this role Ms. Whalen provides executive leadership for Harborview and serves as a member of the senior leadership team for UW Medicine.

Ms. Whalen has over 25 years of experience in healthcare and comes to HMC from University Medical Center, Tucson, Arizona where she served as Vice President since 2004. University Medical Center is a 355 bed tertiary/quaternary care facility that serves as the only academic medical center in Arizona and is the teaching hospital for the University of Arizona, School of Medicine. This Arizona hospital is ranked among the nation's premier hospitals in U.S. News and World Report's "America's Best Hospitals". The hospital serves as the level I trauma center for the region and has the full range of comprehensive medical and surgical specialties and centers of emphasis that are similar to those based at Harborview Medical Center. The hospital is a Magnet facility and consistently ranks as the employer of choice for Southern Arizona.

Prior to working at the University of Arizona Medical Center, Ms. Whalen worked at Saint Mary's Regional Health Care System in Nevada. She also worked previously at San Francisco General Hospital and the Maryland Institute for Emergency Medical Services Systems, and served as a national healthcare consultant for trauma care systems across the country. Ms. Whalen holds a bachelor's degree in nursing and a master's degree in Public Health and Administration from Chapman University. She was the founding Editor of the Journal of Trauma Nursing and has numerous publications in emergency and trauma services and in healthcare system design. Ms. Whalen is a well recognized national speaker and has served as a reviewer for verification of trauma centers across the United States.

Stephen P. Zieniewicz, MPH, FACHE, Committee Member

Mr. Zieniewicz, Executive Director for University of Washington Medical Center (UWMC), has provided executive leadership for the UWMC since September 2007. UWMC is a 450 bed tertiary/quaternary care academic medical center providing a wide range of highly complex services including solid organ transplant, Level I NICU, neurosciences, blood and marrow transplantation for oncology patients and robotic assisted surgery. UWMC's approach to care is patient and family

centered and currently has seven Patient and Family Centered Care Advisory Councils. UWMC again achieved US News and World Report Honor Roll Status in 2011, ranked #1 in the Seattle Metro area and is a Magnet Recognized Nurse Hospital. Mr. Zieniewicz is a Board Member of the American Heart Association.

Prior to coming to the University of Washington Medical Center, Mr. Zieniewicz has served as Chief Operating Officer at Saint Louis University Hospital (SLUH) and Tenet Healthcare Corporation for three years from 2004 to 2007. SLUH is a 356-bed tertiary care facility recognized by US News & World Report. SLUH has a comprehensive organ transplant program that serves the Midwest, is a cardiac center of excellence recipient for quality and efficiency, and is the busiest Level I trauma center for the Missouri and Illinois region. He has also served as Chairman for Missouri State Wide Disaster Preparedness Committee of the Missouri Department of Health, Division of Health and Senior Services. SLUH is owned by Tenet Healthcare Corporation and is the academic medical center and teaching hospital for the Saint Louis University School of Medicine.

Prior to working at SLUH, Mr. Zieniewicz worked in the Winthrop South Nassau University Health System on Long Island, NY, serving as the Vice President for Support and Ancillary Services at South Nassau Hospital. He facilitated the launch and clinical integration of the 11-hospital Long Island Health Network where he was an Assistant Vice President. For seven years, he was an Administrator at Winthrop University Hospital. He began his career at North Shore University Hospital in Manhasset, New York and spent 12 years in that system, and was promoted from a staff role to management and senior management positions.

Mr. Zieniewicz has more than 25 years of experience in healthcare and holds a Master's degree in Public Health from the Columbia University School of Public Health in New York and a Bachelor's degree in Biology from St. John's University in New York. Additionally, he is a Board Certified Healthcare Executive Fellow of the American College of Healthcare Executives. Mr. Zieniewicz has an interest and passion for patient safety, quality, service excellence, advanced technologies and translational research, and building collaborative and effective physician relationships.

Brenda Zierler, PhD, RN, FAAN, Committee Member

Dr. Zierler’s research explores the relationships between the delivery of healthcare and outcomes—at both the patient and system level. Her primary appointment is in the School of Nursing at the University of Washington, but she holds three adjunct appointments – two in the School of Medicine and one in the School of Public Health. As co-PI of a Macy Foundation-funded study, Dr. Zierler leads a group of interprofessional faculty and students in the development of a simulation-based, team training program to improve collaborative interprofessional communication both within teams and with patients. Dr. Zierler is currently named as an IPE expert on five externally funded grants. Her focus has been on faculty development. Dr. Zierler was the co-planning lead for the Collaborating Across Borders (CAB) III meeting in Tucson, Arizona (November 2011) and is a member of the planning committee for the 2013 Collaborating Across Borders Interprofessional meeting in Vancouver, BC.

Dr. Zierler is the Co-Director for the UW Center for Health Sciences Interprofessional Education, Practice and Research and Associate-Director of the UW Institute for Simulation and Interprofessional Studies (ISIS) in the School of Medicine. She leads the Faculty Development Committee and is the ISIS liaison on the UW Medicine Education and Training Coordination Committee (identifying interprofessional training needs across the health system –linking education to practice). Dr. Zierler is the Co-PI of a Josiah Macy Jr. Foundation grant focused on faculty development for interprofessional education and collaborative practice. She also leads a HRSA training grant focusing on faculty development in the use of technology across a 5-state collaborative. Dr. Zierler is a Board Member of the American Interprofessional Health Collaborative, a member of the IOM Global Forum on Innovation in Health Professional Education, and is on the Advisory Committee for the RWJF New Careers in Nursing Program. She was a fellow in the RWJ Nurse Executive Program (2008-2011).



ISIS PROVIDES OPPORTUNITIES TO PRACTICE A WIDE RANGE OF PROCEDURES. DR. MANUEL FERREIRA, A NEUROLOGICAL SURGEON AND ISIS CORE FACULTY MEMBER, CAN BE SEEN HERE PRACTICING SMALL VESSEL TECHNIQUES.

Status of Seventh Year Goals (7/2011-6/2012)

Strategic Goal 1: Collaborate within UW Medicine and with Affiliated Institutions to Improve Patient Safety, Quality, and Team Management

Operational Objectives:

1. Continue implementation of the Central Venous Catheter (CVC) Simulation-based training and certification.

STATUS: Continued implementation of the Central Venous Catheter (CVC) Health System simulation-based training testing by:

- Trained and tested 238 faculty, fellows and residents on CVC (totaling 1,156 trainees since 2008).
- Continued improvements to the current curriculum with content updates and by creating a workgroup that will begin implementation of new online platform.
- Continued training and testing of incoming residents and faculty.
- Presented CVC curriculum to Northwest Hospital and Medical Center.
- Continued investigation into bringing the online module more widespread via the American College of Surgeons and other interested entities.

2. Enhance collaborations with current ISIS partners (Seattle Children's, HMC Clinical Education and Community Training Center, Boise VA, etc.) and begin coordination/collaborations with new partners (Northwest Hospital & Medical Center, Valley Medical Center, Airlift Northwest, as well as the state-wide initiative, SCOAP).

STATUS:

- Formalized collaboration with Seattle Children's simulation center by executing MOU.
- ISIS continues to partner with HMC Clinical Education and Community Training Center. In FY12, over 2,700 learners and over 18,400 learner hours were recorded between the two programs. All ISIS staff attended BLS training facilitated by the Community Training Center.
- Site visit with critical members of ISIS team and VA system. Performed technical trials of a new distance learning platform.
- Site visit with critical members of ISIS team and WWAMI/ Health Science leadership at the Riverpoint Campus in Spokane, WA.
- Finalized recruitment of ISIS Director of Education Innovations and Strategic Programs, Sara Kim, PhD, to begin on August 1, 2012. Her responsibilities include serving as the Associate Director of the Center for Medical Education and outreach to regional educational practitioners and researchers.
- ISIS is in discussion with Community Health Education & Simulation Center (CHESC) regarding an MOU. NWH will be integrated into the ISIS financial structure, beginning in FY13.

- Medical student courses have been held at NWH's CHESC. Future courses for ICM-II are scheduled at NWH and HMC for FY13.
- Preliminary discussions with simulation enthusiasts at Valley Medical Center. ISIS is currently looking for opportunities for integration of training.
- Provided training for School of Dentistry General Practice Residency program.

3. Integrate ISIS representation into the newly formed UW Medicine Strategic Educational Planning Committee.

STATUS:

- Drs. Kim, Ross, and Zierler sit on the UW Medicine Strategic Educational Planning Committee.
- Drs. Kim and Zierler are pillars for the Center for Medical Education.

4. Identify and develop 2 systematic standardized approaches for training through the UW Medicine Strategic Educational Planning Committee. For example:

A) Code Blue

STATUS:

- Developed a revised Code Blue response at UWMC and HMC, standardizing the response across hospital systems. The project clarified response roles, developed shared institutional policies and procedures and improved Code Blue documentation. The project is currently developing curriculum for training the enriched Code Blue response.

B) Moderate Sedation

STATUS:

- Developed an improved and more comprehensive Moderate Sedation Training for non-anesthesiology providers (MDs, PAs and ARNPs). Training includes "Basic Airway Management" video as well as a simulation curriculum for remedial training. The curriculum is currently being used to teach dental students on anesthesia residency rotation.

C) Team Communication

STATUS:

- Developed formal training programs for team communication at the student, resident, and provider level, using the national Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS). Programs include Introduction to Team Communication, Fundamentals of TeamSTEPPS, and TeamSTEPPS Master Training (Train the Trainer) model.

D) Intubation Skills

STATUS:

- Developed video training on intubation skills. The video will be used to teach many specialties.

5. Identify strategies with UW Medicine leadership to integrate system-wide psychomotor and TeamSTEPPS skills into the 'Patients Are First' initiative.

STATUS:

- CVC Simulation Testing
 - Continued implementation of the CVC training program with the training of all incoming faculty, fellows, and residents.
 - Looking for opportunities to expand CVC training to Northwest Hospital & Medical Center and Valley Medical Center.
- OB Bleeding Scenario
 - Conducted multiple in-situ simulations for interprofessional learners, reaching over 200 participants in FY12.
- Code Blue
 - TeamSTEPPS and team communication principles have been imbedded into the core curriculum of all Code Blue training at UWMC and HMC.
 - With the concepts of team communication imbedded into the redesign of the Code Blue response, as noted above, the implementation of the proposed redesigned Code Blue response should further improve quality of care and safety at the patient level.
- CAUTI
 - ISIS faculty have provided training of UWMC nursing staff for placement of foley catheters in conjunction with the Catheter-Associated Urinary Tract Infections project.

6. In collaboration with UW Medicine Strategic Educational Planning Committee, identify and operationalize Patient Safety or Team Management Initiatives. Such as:

A) Robotics Training:

STATUS:

- Held 2012 Urology Boot Camp which emphasized robotics training.

B) Training Around New Technologies

STATUS:

- Held two course(s) in Single Incision Laparoscopy Training in FY12.
- Developed and held ten courses on the basics of ultrasound for students/residents/physicians at UWMC and HMC.

Strategic Goal 2: Embed Simulation and Educational Technologies in Training Programs throughout UW Medicine and WWAMI

Operational Objectives:

1. Strengthen the culture of interprofessional education by:

A) Developing a training program in interprofessional education and collaboration (IPE/IPC).

STATUS:

- Held IPE/IPC Institute Retreat to begin development of a training program. Participants included faculty from Spokane Riverpoint campus.
- ISIS Associate Director is member of The UW Centers for Comparative and Health Systems Effectiveness (UW CHASE Alliance).
- Dr. Zierler, ISIS Associate Director, has served as an invited member of a HRSA symposium regarding IP Team-based Competencies.
- Dr. Zierler is currently serving as a member and on the Planning Committee for the IOM Global Forum on Innovation in Health Professional Education.
- Dr. Zierler participated on the Macy Foundation Grantee Planning Committee.
- Dr. Zierler was an invited participant on a consensus panel sponsored by the ANCC and the ACCME and Co-facilitated the IPE Subgroup.
- Dr. Zierler has consulted regarding integration of IPE in health science education programs at other universities. With the recent (2012) release of 3 RFAs for HRSA-funded IPE initiatives (GEC, ANE, NEPR, CC-IPECP), Dr. Zierler has been named a consultant on seven grant applications.

B) Collaborating with WWAMI faculty to increase access to ISIS resources (e.g. faculty development, IPE/IPC training, simulation curriculum development) and training key faculty/leadership in interprofessional education and collaboration (IPE/IPC).

STATUS:

- Held tour for the UW Teaching Scholars program.
- In FY12, ISIS supported monthly faculty development meetings, providing additional support and resources to its faculty.
- ISIS has developed an online Toolkit for faculty development: <http://www.collaborate.uw.edu>. The toolkit's individual training resources have been accessed and completed by nearly 850 participants.

2. Successfully recruit an Educational Specialist to develop curriculum, mentor faculty and develop training programs.

STATUS:

- Finalized recruitment of ISIS Director of Education Innovations and Strategic Programs, Sara Kim, PhD, to begin on August 1, 2012. Her responsibilities include serving as the Associate Director for the Center for Medical Education as well as developing and implementing a strategy for

providing mentoring and faculty development for members that may include teaching skills, curriculum development, scholarship, designing evaluation and other areas.

3. Develop ISIS Fellowship positions with support from UW Medicine Departments/Programs.

STATUS:

- ISIS leadership has had preliminary discussions with the Chairs of the Departments of Anesthesiology and Pain Medicine and Surgery. A more formal plan will be presented in FY13.

4. Integrate ISIS representation into the ongoing School of Medicine Curriculum Review Process.

STATUS:

- Both Drs. Ross and Zierler were initially interviewed as a part of the curriculum review process.

5. Look for opportunities to enhance:

A) Medical student involvement with ISIS

STATUS:

- Supported 2nd Year Medical Students GI course
- Hosted 2nd and 4th Year Medical Students Capstone skills courses
- Coordinated and held Interprofessional Team-BITS training sessions for over 300 students from the Schools of Medicine, Nursing, Pharmacy and MEDEX program, (162 medical students participated).
- Interprofessional education and skills course for Anesthesia focus group medical students
- Boise VA Medical Students Distance Learning – Airway Management

B) VR-based trainings

STATUS:

- Design team around VR patient platform

C) Serious games

STATUS:

- Met with Firsthand Technology, Inc. regarding a possible collaboration around serious games.
- Met with members at the Center for Serious Play from UW Bothell.

D) New simulation platforms

STATUS:

- Developed DeepCAST skills trainer, currently working on curriculum.
- Initial development of kidney renal biopsy.

E) Training around new technologies

STATUS:

- One of eight institutions to pilot the Ramphal Cardiac Simulator.

- Development and testing of EventDoc™ system
- Robotics Training during Urology Bootcamp
- Endoscopic extended transphenoidal and transtubercular resection on cadaver.

Strategic Goal 3: Strengthen ISIS Financial Position

Operational Objectives:

1. Pursue University Affiliated Research Center (UARC) or Center of Excellence (COE) designation through federal funding.

STATUS:

- Draft of MOU with the Center for Advanced Medical Learning and Simulation (CAMLs) in Tampa, FL. Formalizing relationship with a number of simulation centers may position ISIS for a multi-center University Affiliated Research Center (UARC) opportunity.
- Senator Patty Murray's staffers visited ISIS to discuss potential UARC.

2. Successfully recruit Associate Director for Research to mentor faculty in research design, pursue extramural funding, and seek opportunities for commercialization of products.

STATUS:

- ISIS worked on the recruitment of Dr. Kanav Kahol in FY11 and FY12. In early FY12, Dr. Kahol decided to return to India and accepted a position for the government of India.

3. Meet or exceed minimum number of funded courses:

A) ASA MOCA Training (2 Courses)

B) Neurosurgery at HMC (3 Courses)

C) ENT at HMC (2 Courses)

D) Vascular Surgery at HMC (2 Courses)

E) Orthopaedics and Sports Medicine at HMC (3 Courses)

F) External User HMC Courses (6 Courses)

G) Formalize the process for funding operational infrastructure with stakeholders.

STATUS:

- Three MOCA courses offered, one MOCA course held.
- Held two Neurological Surgery courses (funded).
- Held three-day ENT course (funded).
- Held two Vascular Surgery courses (funded).
- Held four (6 days) Orthopaedics and Sports Medicine courses (funded).
- Ten days of rental for external users (funded).
- Held two National Team STEPPS courses (funded).
- ISIS formalized the process for funding operations infrastructure with UWMC and HMC. ISIS is currently formalizing the funding operations process for NHW.

Facilities

Harborview Medical Center

The ISIS-HMC facility is an 8,000 square foot simulation center, housed on the third floor of the Ninth and Jefferson Building. Since its opening in 2010, this facility has experienced continued growth in learner hours and in the diversity of its trainee audience. ISIS-HMC complements the ISIS-UWMC facility with specialty specific simulation training; ISIS-HMC focuses in the areas of emergency medicine, neurological surgery, paramedics, ophthalmology, orthopedics, trauma, vascular surgery, and Harborview's Clinical Education and Community Training Center (CTC).

ISIS-HMC is equipped with cutting-edge simulation technology, such as several simulated patient manikins, state-of-the-art computer models for laparoscopic and gastroenterology training, as well as video equipment and multiple procedure and task-training models. Additionally, this facility recently received an upgrade in its audio/visual system. The revamped system allows for multiple training sessions to be recorded simultaneously, and with High Definition quality. Trainees then have the opportunity to view their recorded simulation sessions, which augments the learning experience.

Another feature of ISIS-HMC is its nine station wet lab space for cadaveric trainings. In addition to wet-lab areas, the proctor station can be converted into a fully functional Virtual OR, equipped with a range of surgical towers, booms, lighting, and anesthesia equipment. Given the sophistication of its lab and equipment, ISIS-HMC embodies ISIS' mission to harness technological advances to improve the quality of medical education.



AT HARBORVIEW'S NINTH AND JEFFERSON BUILDING, ISIS HAS A STATE-OF-THE-ART CADAVERIC TRAINING FACILITY EQUIPPED WITH STRYKER AND MEDTRONIC TECHNOLOGY INCLUDING: NINE STRYKER LAPAROSCOPY TOWERS, THE NAVIGATION SYSTEM II, AND THE NAVSUITE OPERATING ROOM.

University of Washington Medical Center

Since 2007, ISIS-UWMC has been located on the first floor of the University of Washington Medical Center Surgery Pavilion. This simulation center is arranged with versatility as its mainstay, comprised of a fully functional virtual operating room, skills lab, conference room, and administrative offices. The training reach of ISIS-UWMC extends beyond the ISIS facility into the University of Washington Medical Center through in-situ training sessions and regular resident training sessions with the Department of Anesthesiology's Transesophageal Echocardiography (TEE) lab's ultrasound simulation equipment. ISIS-UWMC is a hub for anesthesiology, OB/GYN, family medicine, internal medicine, general surgery, cardiothoracic surgery and interprofessional education.

ISIS-UWMC training is supplemented by the Center for Videoendoscopic Surgery (CVES) laboratory, located on the 6th floor of the Health Sciences Center. This 950 square foot training and research laboratory supports the education of medical students and residents in surgical disciplines, while also hosting community-based educational programs in open and minimally-invasive surgical techniques.

While ISIS-UWMC is the smaller of ISIS' facilities, the ongoing demand for training in this space underscores the importance of its location in the Surgery Pavilion and the innovative and reconfigurable nature of the lab.



ISIS-UWMC HAS A FULLY FUNCTIONAL VIRTUAL OPERATING ROOM, AS SEEN HERE. IN ADDITION, UW MEDICINE RESIDENTS AND ATTENDING PHYSICIANS CAN RECEIVE 24/7 ACCESS TO THE SKILLS LAB AT ISIS-UWMC, TO PRACTICE A WIDE ARRAY OF PSYCHOMOTOR SKILLS.

Northwest Hospital & Medical Center

The Northwest Hospital and Medical Center's Community Health Education and Simulation Center (CHESC) opened in 2009, and offers a wide spectrum of healthcare training opportunities to healthcare professionals, students, and community members. The center includes two fully-equipped simulation rooms, a control room, four multi-media classrooms and "Easy Street," a life-sized replica of a city street that provides an environment for rehabilitation and simulation training. Easy Street is the only facility of its kind in Washington State and contains modules such as of a restaurant, bank, laundromat, movie theater, house, office, and other training areas. Such realistic environment allows trainees to experience simulation scenarios as they would arise in daily life.

Northwest's Community Health Education and Simulation Center promotes healthcare education within the region by emphasizing community outreach, as well as training opportunities for emergency medical services personnel, nurses and other healthcare providers. The focus of all trainings is to reduce medical errors and improve patient safety.



NORTHWEST HOSPITAL & MEDICAL CENTER'S COMMUNITY HEALTH EDUCATION AND SIMULATION CENTER PROVIDES INVALUABLE SIMULATION TRAINING OPPORTUNITIES TO THE COMMUNITY IN NORTH SEATTLE.

Boise VA Medical Center

As the only medical school serving the 5-state WWAMI Region (Washington, Wyoming, Alaska, Montana, and Idaho), the University of Washington School of Medicine is involved in rural health projects throughout the region. Among other sites in the WWAMI region, ISIS works closely with the simulation center at the Boise VA using technology for the dissemination of training materials and rural healthcare delivery.

The Boise VA simulation center is comprised of three simulation rooms and totals 400 square feet. Faculty at this center work closely with ISIS on numerous projects, such as one that evaluates distance learning. This collaboration is working on the development of curricula for instruction of airway management, lumbar puncture, and central line placement. Most recently, ISIS and the Boise VA have piloted the use of iPads to allow the instructor, who is located at a remote site, to "walk" through the class and to observe procedures from afar. This method is popular with learners, who can communicate directly with, and receive feedback from, the instructor via the iPad. The results have shown equal efficacy between local instruction as compared with the distance curriculum.

Additionally, the Boise VA simulation center has completed over 65 simulation activities, with a total of 383 learners. These activities include mock codes for interprofessional groups, such as internal medicine residents, surgery personnel, nurses, pharmacists, and medical students. Boise VA also has a full-year curriculum for fourth year medical students that includes procedural teaching using simulation, including central line training, airway management, lumbar puncture, arterial line placement, Heimlich tube placement, and thoracentesis. Other trainings include a yearly "Boot Camp" for fourth year medical students, which focuses on procedural trainings and managing medical emergencies, and the "Dirty Dozen" for Medicine, which entails a collection of twelve cases that have to be diagnosed and managed urgently or emergently.

Boise VA's simulation center serves as a hub for both undergraduate and graduate medical education, and an exemplary model for expanding ISIS' partnership with medical educators throughout WWAMI.

Interprofessional Education and Practice



Brenda Zierler, PhD, RN, FAAN
ISIS, Associate Director

Professor of Biobehavioral
Nursing and Health Systems

Overview

The Interprofessional Education and Practice (IPEP) Committee oversees a wide range of ISIS educational activities, including curriculum development, faculty development, and educational research. The Committee is chaired by Brenda Zierler, PhD, RN, FAAN. Dr. Zierler is the Associate Director of ISIS and the Co-Director of the UW Center for Health Sciences Interprofessional Education, Research and Practice (CHSIERP).

Mission

The Interprofessional Education and Practice Committee promotes excellence in education via:

1. Integration of IPE competencies into standard curriculum development in all simulation training activities
2. Development and validation of education measures
3. Expansion of distance learning using cutting-edge technologies
4. Faculty development targeting skills and expertise required of competent interprofessional simulation educators

The committee seeks to achieve its mission through an active collaboration within and across the Schools of Medicine, Nursing, Pharmacy, Dentistry, Social Work, Public Health and the MEDEX Physician Assistant Program. Effective interprofessional communication and teamwork has become a central focus of the IPEP Committee.

Under the direction of Dr. Zierler, the University of Washington continues to position itself at the forefront of interprofessional healthcare training.

The vanguard of ISIS interprofessional efforts has been the Team-Based Interprofessional Training Simulations (Team-BITS). Funded in 2008, by the Josiah Macy Jr. Foundation and William Randolph Hearst Foundation (over \$1 million, combined), ISIS, in partnership with UW CHSIERP, developed an immersive simulation-based, team training program for healthcare professional students. This program focuses heavily on team communication in acute care management and disclosing medical errors to standardized patients.

Following the initial program pilot (held in 2010), Team-BITS has for the past two years trained students from the Schools of Medicine, Nursing, Pharmacy, and the MEDEX program in what has been the largest interprofessional training at the University of Washington for healthcare professionals. During this year's week-long Team-BITS course, students worked together managing clinical scenarios in the areas of pediatrics, obstetrics, or adult acute care, gaining both clinical skills practice and team communication training. Since its inception, more than 1,000 health professional students have participated in the simulation-based training to improve communication.

Development of ISIS Curricula

ISIS' educational efforts extend well beyond course training sessions. In addition to training courses, ISIS continues to provide regular assistance to faculty members as they develop curricula and generate scholarly products.

Whether it is through the identification of priority training needs (e.g., survey, literature review, existing database systems), or providing direct assistance to the ISIS faculty member for developing their own training curriculum or research protocol, ISIS offers extensive resources to support the educational interests and needs of its faculty.

Perhaps unique to the program itself, the ISIS curriculum development platform includes the support of ISIS faculty through a rigorous development and review process. When it comes to the creation of new educational materials, ISIS provides assistance to UW faculty on multiple aspects of developing a curriculum, including writing learning goals and objectives, identifying prerequisite knowledge, developing relevant cases, and required cognitive and procedural training components. Following completion, curricula are internally peer reviewed before they are submitted for external peer review and acceptance at the Association of American Medical Colleges (AAMC) MedEdPORTAL. The MedEdPORTAL provides electronic, web-based access to peer-reviewed educational materials. Launched in 2006 and updated in 2012 to include interprofessional curricula, this centralized repository houses digital educational materials including curricula, didactics, and teaching and assessment tools.

Formal Curricula Under Development

The time of development for each curriculum can vary dramatically from topic to topic, however the typical timeline from conception to publication averages 6-12 months. Each curriculum is subjected to a demanding internal review process, often resulting in several iterations before it is ready for submission to MedEdPORTAL. As of June 30th 2012, MedEdPORTAL has formally accepted nine ISIS curricula for publication with an additional three undergoing submission review at this time.

Using a standardized curriculum template, educational materials currently undergoing the curricula development process include:

Anesthesiology

1. Anaphylaxis
2. Difficult Airway Management***
3. Distance Airway Curriculum*
4. Fundamentals of Basic Ultrasound
5. Medical Error Disclosure
6. OB Bleeding Emergency***
7. O2 Line Failure
8. Venous Air Embolism***

Internal Medicine

1. Cardiac Training*
2. Lumbar Puncture
3. Thoracentesis

OB/GYN

1. Basic OB/GYN Technical Skills
2. Basic OB Ultrasound
3. Breach Delivery
4. Hemorrhage Management
5. Hypertensive Management
6. Intrapartum Fetal Monitoring**
7. Shoulder Dystocia***
8. Trans-Vaginal-Tape Mid-Urethral Sling

Dentistry

1. Conscious Oral Sedation

Ophthalmology

1. Panretinal Photocoagulation*

Pediatrics

1. Pediatric Anticholinergic Toxidrome***
2. Pediatric Cholinergic Toxidrome***
3. Pediatric Hypovolemic Shock*
4. Pediatric Opioid Toxidrome***

Surgery

1. Endoscopy
2. Laparoscopy
3. Laparoscopic Cholecystectomy
4. Suturing/Wound Management

Urology

1. Suprapubic Catheter Placement ***

Interprofessional

1. Basic Ultrasound Competency
2. Central Venous Catheter Placement
3. Code Blue Medical Emergency Management
4. Flexible Bronchoscopy***
5. Medical Student Elective
6. Team Training
7. Team-BITS: OB Acute Care

*Under Internal Review

**Submitted to MedEdPORTAL

*** Accepted by and Available on MedEdPORTAL



NURSING AND MEDICAL STUDENTS WORK TOGETHER DURING THE INTERPROFESSIONAL EDUCATION TRAINING CALLED TEAM-BITS.

Future

ISIS continues to expand its faculty development training. Major efforts for this coming year include:

1. The continued expansion of the ISIS curricula portfolio through AAMC MedEdPORTAL.
2. Continued development of ISIS e-learning modules for training, students, providers and instructors across WWAMI.
3. Active outreach across WWAMI and UW Medicine Departments and programs, integrating simulation into orientation and professional development.
4. Piloting of a train-the-trainer interprofessional faculty development approach for simulation-based team training.

The IPEP committee continues to provide guidance and support for ISIS faculty wishing to develop educational materials within ISIS. There remains added emphasis on the identification and development of interprofessional curriculum as ISIS continues to expand upon its mission to provide standardized simulation education both locally and nationally.

With faculty development opportunities, curricula development support, mentoring for academic promotion, research support and formalization of faculty commitments to ISIS, the IPEP committee continues to provide valuable resources to faculty at all levels.

ISIS Educational Database

The development and maintenance of the ISIS database continues to be a major focus. In 2008, ISIS received Human Subjects Internal Review Board approval for the Repository ISIS Educational Database to allow trainees and faculty members to log their courses, time-spent, and evaluations within the electronic system. The database provides ISIS faculty and researchers with extensive reports on trainee courses, faculty hours, trainee and instructor evaluations and facility usage. The database provides two key benefits to affiliated ISIS faculty:

- It provides the critical information for documenting faculty teaching records and effectiveness.
- It serves as a research database, informing the development of educational research questions and study design.

In 2011, ISIS leadership approved a redesign of the ISISTrak Database system to provide increased functionality and reporting capabilities. The revamped system will allow for more detailed reporting, a more intuitive user-interface, and direct connection to the new ISIS website. This will allow the public to view upcoming trainings scheduled for the ISIS facilities. The improved ISISTrak Database system is scheduled to launch in late Fall 2012.



MEDICAL, NURSING, AND MEDEX STUDENTS PARTICIPATE IN TEAMBUILDING EXERCISES AS A PART OF AN INTERPROFESSIONAL EDUCATION TRAINING.

Faculty Development

Under the direction of ISIS Executive Director, Dr. Brian Ross and IPEP Chair, Dr. Brenda Zierler, the ISIS faculty across UW Medicine maintain an active network of community via ISIS faculty development.

ISIS has enrolled faculty and staff members from over thirty departments and programs through a formal review process.

ISIS supports its faculty through regular faculty development meetings/workshops, assistance with IRB applications, as well as on-site promotion portfolio and curriculum development assistance. In FY12, ISIS held a faculty development meeting series with a focus on various faculty-identified development topics. Session topics included:

- Faculty Portfolio and Promotions Process (2 meeting series)
- Creating an ISIS Curriculum for Publication
- Access to ISIS: What Resources are Available?
- Technical Development of E-Learning Materials

Faculty Recruitment

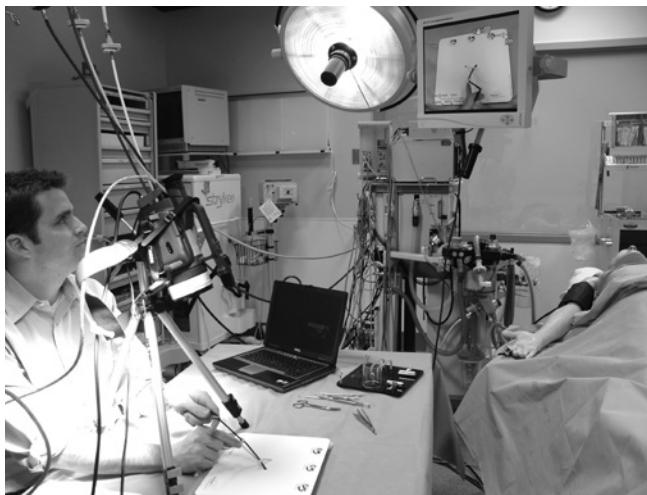
ISIS uses various approaches to recruiting its faculty. Faculty and staff members either contact ISIS directly for involvement or are recommended by their affiliated departments. In addition, ISIS actively recruits senior residents and fellows with interests in implementing educational research projects, generating scenarios for curriculum, or serving as instructors.

ISIS faculty are affiliated in one of the following three categories: (a) Core Faculty (23 Members); (b) Adjunct Faculty (65 Members); and (c) Research Faculty (18 Members).

Faculty Members

Core Faculty Members (23)

Anesthesiology and Pain Medicine	Jo Davies, MB BS, FRCA Stefan Lombaard, MB BA, ChB, FANZCA Daniel Low, MB BS, FRCA Julia Metzner, MD Brian Ross, PhD, MD Karen Souter, MB BS, FRCA Alexander Vitin, MD, PhD
Medicine	Adeyinka Adedipe, MD Rosemarie Fernandez, MD Karen McDonough, MD Amy Morris, MD
Neurological Surgery	Manuel Ferreira, MD, PhD
Obstetrics and Gynecology	Leslie Carranza, MD, MS Michael Fialkow, MD, MHA
Ophthalmology	Michael Wu, MD
Orthopaedics and Sports Medicine	Chris Allan, MD Lisa Taitsman, MD
Surgery	Saurabh Khandelwal, MD Nahush Mokadam, MD Carlos Pellegrini, MD, FACS, FRCSI (Hon.) Mika Sinanan, MD, PhD Thomas Varghese, MD, FACS Andrew Wright, MD



DR. ANDREW WRIGHT, AN ISIS CORE FACULTY MEMBER, CREATES BASIC SURGICAL SKILLS VIDEOS WHICH CAN BE ACCESSED VIA ISIS' WEBSITE.

Adjunct Faculty Members (65)

Anesthesiology and Pain Medicine	Laurent Bollag, MD Gregory Dembo, MD Thomas Edwards, MD, PhD Aaron Joffe, DO Christopher Kent, MD Erica McCall, CRNA Clemens Ortner, MD, MSc, DESA Gene Peterson, MD, PhD Kenneth Plitt, CRNA Alec Rooke, MD, PhD Gouri Sivarajan, MB BS Murali Sivarajan, MB BS Douglas Thompson, MD Youri Vater MD, PhD Shilpa Verma, MD Karen Wong, MB BS, FANZCA
Family Medicine	Mark Beard, MD Justin Osborn, MD
MEDEX	Linda Vorvick, MD
Medicine	Medley Gatewood, MD William Hurley, MD Jonathan Ilgen, MD Molly Jackson, MD Martin Makela, MD Margaret Neff, MD Raimund Pichler, MD Jamie Shandro, MD
Neurological Surgery	Richard Ellenbogen, MD Laligam Sekhar, MD
Nursing	Michelle Goodburn, RN, BSN Kellie Garth Green, RN, BSN Deena Guren, RN, MSN, CNOR Kim Jackson, RN, BSN Chris Laux, RN Lynn Lingen, RN, BSN Karen Moe, RN, MEd Kathy O'Connell, RN, MSN Cindy Sayre, RN, MN Lauren Thorngate, MS, RN, CCRN Reiko Torgeson, RN, MS Pam Turner, RN Karen Wong, RN, MN Jeanette Zaichkin, RN, MN, NNP-BC

Obstetrics and Gynecology	Anne Marie Aimes-Oelschlager, MD
Ophthalmology	Raghu Mudumbai, MD Parisa Taravati, MD
Orthopaedics and Sports Medicine	David Barei, MD Jens Chapman, MD Robert Dunbar, MD Jerry Huang, MD Paul Manner, MD Sean Nork, MD
Otolaryngology	Greg Davis, MD, MPH Kris Moe, MD, FACS Maya Sardesai, MD Robert Stanley, MD, DDS
Pathology	Corinne Fligner, MD
Pediatrics	Mary King, MD Thomas Pendergrass, MD, MSPN Jennifer Reid, MD Joan Roberts, MD Kimberly Stone, MD, MS, MA Thomas Strandjord, MD
Surgery	Edgar Figueredo, MD Jeff Friedrich, MD

Research Faculty Members (18)

Anesthesiology and Pain Medicine	Vincent Hsieh, MD Ryan Jense, MD Bala Nair, PhD
Biological Structure	James Brinkley, MD, PhD John Clark, PhD
Medicine	Elliot Jerud, MD Lauge Sokol-Hessner, MD Paula Carvalho, MD
Nursing	Christine Adams, BSN, RN Lauren Cline, RN, MN Nicole Kupchik, RN, MN, CCNS Sarah Shannon, PhD, RN Brenda Zierler, PhD, RN, FAAN
Otolaryngology	Mark Whipple, MD
Pharmacy	Nanci Murphy, PharmD, RPh Peggy Odegard, PharmD, BCPS, FASCP, CDE
Radiology	Carolyn Wang, MD
Urology	Thomas Lendvay, MD
Surgery	Brant Oelschlager, MD

CVES Faculty Member



UNDER FACULTY SUPERVISION, ANESTHESIA RESIDENTS TRAIN ON THE TRANSESOPHAGEAL ECHOCARDIOGRAM SIMULATOR AT THE UW MEDICAL CENTER.

Current Courses

ISIS course offerings are the following courses which have been taught to over 12,764 learners and totaling 54,087 learner hours:

Anesthesiology and Pain Medicine

ACLS for Anesthesiology. This course is comprised of a number of short ACLS sessions for fourth year anesthesia residents. Residents must thoroughly interpret the monitors and lab results to correctly identify and treat the arrhythmias, which include Bradycardia, PEA, and Asystole.

Anesthesia Resident Orientation. These courses teach the principles of airway management. Residents first attend a lecture, followed by hands-on training on airway simulators. Residents learn about the proper management before, during, and after surgical procedures and emergency management. Topics include Airway Basics, Advanced Airway, and Station Set-up.

Anesthesia Resident Simulation Training. These courses teach emergent patient management skills using a variety of simulation scenarios. Anesthesia residents will often start scenarios in the OR. Focus is on correctly assessing the patient's situation and treating the patient accordingly. Topics include Malignant Hyperthermia, O₂ Line Failure, Difficult Airway, OB Bleeding, Failed Spinal with Difficult Airway, Anaphylaxis, Venous Air Embolism, Anesthesiology Machine Training, Breaking Bad News, Error Disclosure, Pulseless Electrical Activity, VT to VF, Bradycardia, and Rapid Sequence Induction.

Anesthesia Resident Skills Training. These courses teach residents advanced skills to correctly perform a variety of anesthesia-based skills. The class starts with a short overview of the procedures including an introduction to the anatomy, tools used and techniques, followed by hands-on training. A flexible bronchoscope and manikin simulators are used to provide lifelike anatomy and feel. Skills topics include: Cricothyroidotomy, Induction, Lumbar Puncture, Surgical Airway, Ultrasound Dexterity, Basic Airway, Fiber Optic Dexterity, Fluoroscopically Guided Needle Placement, and One Lung Ventilation.

Capstone Anesthesia Skills. ISIS provides procedural and skills training within anesthesiology-based scenarios for both 2nd and 4th year medical students as part of the year-end practicum. Students review essential skills learned throughout medical school and clinic-based training as they make their transition to wards and residency. Topics include: Team Communication, Admit Orders and Prescriptions, ECG, ABG, CXR, IV Starts, Scrubbing for Surgery, Ward Team Dynamics, Airway Management and Simulation.

Maintenance of Certification - Anesthesia. This course offers an immersive simulation education experience endorsed by the American Society of Anesthesiologists (ASA) for ABA Diplomates seeking to fulfill their Practice Performance Assessment and Improvement (PPAI) requirement for MOCA. The simulation course fulfills the Part IV requirement of the ABA MOC-A Program.

Medical Student Intro to Anesthesia. These courses are designed to teach basic airway principles and give an introduction to managing both a general anesthetic and code situation. Students begin the day with a lecture, followed by instruction in airway management and an introduction to the operating room equipment and anesthesia machine. Students move into the OR where they are guided through a general anesthetic on a human patient simulator and then allowed to go through it again on their own. The final simulated anesthetic will also include a code situation that will have to be managed appropriately. Topics include General Simulation, Intubation Workshop, and Critical Care Simulation.

Resident Lecture - Communication Skills. This course teaches the principles of crew resource management during a critical event in any medical setting. The class focuses on the development of communication skills, the prioritization of tasks, leadership skills and task assignments during the critical event. Interactive scenarios to practice these skills are performed in a virtual operating room using a standardized patient.

Boise

Boise - Central Line Testing (Non-Distance). Offered specifically at the WWAMI training site at Boise VA Medical Center, the course is designed for healthcare providers that place central venous catheters; this course teaches the basic principles and techniques for placing a central venous line into a patient. Learners first complete an E-Learning cognitive training module and training with a manikin before attending the testing session. At each skills session, learners review situations in which a central line would be used, are instructed in ultrasound use and finally, practice central line placement using a task-training manikin.

Boise Medical Student Skills Training - This course is a series of novice level courses geared towards medical students. The course topics include: basic airway management, pediatrics, OB/GYN, surgery knot-tying and suturing, common emergency medicine patients, and code management.

Boise Nursing Skills Training/Testing - An introductory course is geared towards nursing students and nurses, this course's primary focus is on learning and improving common bed-side procedures. These basic procedures include: phlebotomy, IV placement, injections, blood pressure reading, foley placement, airway management, and sterile cleaning techniques.

Boise Nursing Simulation Training/Testing - This training focuses on crisis management scenarios for nurses and nursing protocols. These courses utilize high-fidelity manikins and complex crises that nurses may or may not face while on service. The purpose of these simulations is to focus on teamwork and management for nurses in high-stress situations.

Boise Mock Code Training - In-situ code training is for physicians, nurses, and pharmacists. Medical Emergency Response Teams are taught basic principles in interprofessional team communication and function in simulated full scale in-situ patient emergency scenarios.

Boise Nursing Competency Training - This training is a combination of cognitive and didactic exams implemented in the nursing curriculum. These exams ensure that the nurses have adequate knowledge and skills to work in a clinical setting.

Boise Resident Skills/Simulation Training - These courses cover basic and adverse scenarios that may or may not be common in practice. The training involves a series of lectures and the use of simulators and simulations.

Boise Interprofessional Skills Training - This course focuses primarily on team communication and team training during basic and adverse scenarios. The course involves physicians, medical students, nurses, pharmacists, and family members.

Center for Community Training

Community Training Center – ACLS/BLS. These courses are provided with the approval by the American Heart Association (AHA) and are comprised of an instructional lecture and practicum testing stations for certification in Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS).

Community Training Center – ECG and Pharmacology Training. The course can be taken to prepare for ACLS, or is intended for ACLS students needing to improve after the ACLS pre-course self-assessment test. It is specifically designed to address a key knowledge gap in electrocardiogram (ECG) and pharmacology, the American Heart Association's adult ECG and pharmacology course is a new program focused on specific ECG recognition skills and drug treatment knowledge.

Clinical Education

Clinical Education. ISIS provides training for healthcare professionals in a number of different specialties. The course provides both didactic lectures and hands-on practice with clinical simulators. Topics include Advanced Trauma Care, Burn Core, End of Life Core, ENPC, HA, New Graduate Orientation, PA, Progressive Care Tele, Pulmonary, Sedation Core, Spine Day, and Stroke.

Clinical Engineering

Clinical Engineering. This course teaches basic principles and techniques for operating a ventilator. Participants begin the day with a lecture followed by hands-on instruction in ventilator management. Participants also learn basic skills in handling a breath analyzer.

Distance Learning

Distance Airway Course. This course focuses on the importance of proficient airway management. Lecture material and simulation training is provided via teleconference across the WWAMI region and is dedicated to the anatomy of the airway and hands-on skill practice focused on the identification and assessment of the patient airway. This course is designed for 3rd and 4th year medical students, 1st year residents and physician assistants.



ISIS HOUSES STATE-OF-THE-ART VIDEO AND AUDIO RECORDING TECHNOLOGIES, WHICH ARE UTILIZED FOR CONDUCTING RESEARCH AND DEBRIEFING SIMULATION SESSIONS.

Distance Advanced Airway Course. This course focuses on the importance of proficient management of an advanced airway. Lecture material and simulation training are delivered via teleconference across the WWAMI region. The course is dedicated to the anatomy of the airway and hands-on skill practice focused on the identification and assessment of the patient airway. This course is designed for 3rd and 4th year medical students, 1st year residents and physician assistants.

Distance Central Line Training. Designed for healthcare providers that place central venous catheters, this course teaches the basic principles and techniques for placing a central venous line into a patient. Learners first complete an E-Learning cognitive training module and training with a manikin before attending the testing session. At each skills session, learners review situations in which a central line would be used, are instructed in ultrasound use and finally, practice central line placement using a task-training manikin.

Emergency Medicine

ACLS for Emergency Medicine. This course teaches the basics of managing an advanced cardiac life support, including PEA, bradycardia, asystole and ventricular fibrillation. An instructional lecture is given prior to any of the practical portions and ACLS reference handouts are given to aid the simulated scenarios.

Emergency Medicine Resident Skills. This course teaches the basic principles and techniques of a lumbar puncture, thoracentesis, intubations, and cricothyroidotomies. Residents attend a lecture, review situations in which one of the procedures is performed, and then test their skills on a simulator.

Medical Student Intro to Emergency Medicine. Completed during a medical student's Emergency Medicine clerkship, this course is designed to teach medical students the basics of emergency medicine skills including suturing and knot tying, airway management, and splinting.

Ultrasound Basics - Emergency Medicine Skills Training. This course is designed to introduce medical students, residents, and physicians to the the FAST Exam (Focused Assessment with Sonography in Trauma). Trainees work with standardized patients during this course.

Patient Safety Innovation Project (PSIP) ED Simulation Training. This course is an in-situ simulation designed for the Emergency Medicine medical staff. The course focuses on teamwork and communication skills training while reviewing the proper protocols for common emergency medicine complications.

Family Medicine

Family Medicine Resident Skills. These courses teach residents advanced skills to correctly identify and manage difficult situations family medicine residents may encounter. The class starts with a short overview of procedures including an introduction to the anatomy, tools used and techniques, followed by hands-on training. Topics include: Parineal Repair, Shoulder Dystocia, Vacuum Delivery, Lumbar Puncture, Thoracentesis, and Central Venous Catheter placement.

Gastroenterology

Gastroenterology Resident Skills - Endoscopy. Using endoscopic GI trainers, residents complete a wide variety of exercises which help the user with spatial recognition, instrument dexterity and improved motor control. The GI simulator is an advanced computer simulator for practice of navigation and surgical procedures.

Gastroenterology Medical Student Skills. This course utilizes the endoscopic GI Mentors to introduce medical students to a variety of gastroenterology scenarios and procedures as a part of the second year "Gut Course."

Internal Medicine

Internal Medicine Resident Skills. This course teaches the basics of performing thoracentesis, intubations, and cricothyroidotomies. The class begins with a short overview of the procedures including an introduction to the anatomy, tools used and technique, followed by hands-on training.

Ultrasound Basics – Internal Medicine Skills Training

This course is designed to introduce medical students, residents, and physicians to the the FAST Exam (Focused Assessment with Sonography in Trauma). Trainees work with standardized patients during this course.

Interprofessional Education and Practice

Interprofessional Student Simulation – Team Crisis

Management. This course utilizes TeamSTEPPS principles to instruct a combined group of medical, nursing, and pharmacy students in the management of crisis scenarios.

Team-BITS Adult Acute Care Simulation. ISIS provides procedural training for possible adult acute care scenarios for 4th year medical students as part of the year-end practicum. Students review essential skills learned throughout medical school and clinic-based training as they make their transition to residency. Topics include SVT, CHF, and Asthma.

Team-BITS OB Acute Care Simulation and Lecture. ISIS provides procedural training for OB-based scenarios for 4th year medical students as part of the year-end practicum along with a lecture. Students review essential skills learned throughout medical school and clinic based training as they make their transition to residency.

Team-BITS Peds Acute Care Simulation and Lecture. ISIS provides procedural training for Pediatrics-based scenarios for 4th year medical students as part of the year-end practicum along with a lecture. Students review essential skills learned throughout medical school and clinic based training as they make their transition to residency.

ISIS General

Central Venous Catheter Testing. Designed for healthcare providers that place central venous catheters, this course teaches the basic principles and techniques for placing a central venous line into a patient. Learners first complete an E-Learning cognitive training module and training with a manikin before attending the testing session. At each skills session, learners review situations in which a central line would be used, are instructed in ultrasound use and finally, practice central line placement using a task-training manikin.

ISIS-HMC Mock Code (In-Situ). Medical Emergency Response Teams are taught basic principles in interprofessional team communication and function in simulated full scale in-situ patient emergency scenarios. The simulation begins with a nurse finding the standardized patient unresponsive, and is forced to call Harborview Medical Center's code blue response team into action.

ISIS-UWMC Mock Code (In-Situ). Medical Emergency Response Teams are taught basic principles in interprofessional team communication and function in simulated full scale in-situ patient emergency scenarios. The simulation begins with a nurse finding the standardized patient unresponsive, and is forced to call UW Medical Center's code blue response team into action.

TeamSTEPPS Training. This course teaches the principles of crew resource management. The two-day course focuses on the development of communication skills, the prioritization of tasks, leadership skills and task assignments during the critical event.

MEDEX

MEDEX Skills Training. This course is designed to teach the MEDEX Northwest division of Physician Assistant Studies students a variety of clinical skills. Topics include GYN and Suture Lab.

Medics

Medic Skills Training - ACLS/PALS

This course teaches the basics of managing an advanced cardiac life support, including PEA, bradycardia, asystole and ventricular fibrillation. An instructional lecture is given prior to any of the practical portions and ACLS reference handouts are given to aid the simulated scenarios. Adult and pediatric manikins are available for hands-on training.

Neonatal Resuscitation Program

Neonatal Resuscitation Program. This course provides instruction and (re)certification for Neonatal Resuscitation Program providers and instructors throughout the Northwest. Detailed instruction sessions alternate with simulations that use a newborn manikin and focus on both the resuscitation procedures and the equipment involved. Topics include: Instructor Training, Provider, and Renewal.



ISIS HOSTS REGULAR NEONATAL RESUSCITATION TRAINING COURSES FOR A DIVERSE ARRAY OF PROVIDERS, INCLUDING UW MEDICINE AND REGIONAL HEALTHCARE PROVIDERS.

Neonatal Transport Resuscitation. This course provides instruction in the management of neonatal respiration and resuscitation. Designed for pediatric nurses, the course provides detailed instruction sessions, alternated with simulations that use a newborn manikin and focus on both the resuscitation procedures and equipment involved.

Neurological Surgery

Neurological Surgery Skills. This course involves lectures and labs designed to teach neurosurgeons how to perform various approaches and procedures. This course is designed for neurosurgery residents and includes a series of didactic lectures and hands-on practice with cadavers and state-of-the-art surgical devices. Topics include: Anatomy, Microsurgery, Endoscopy, and Dissection.

Nursing

MIC Nurse Skills Training - NRP. This course provides instruction in the management of neonatal respiration and resuscitation. Designed for MIC nurses, the course provides detailed instruction sessions, alternated with simulations that use a newborn manikin and focus on both the resuscitation procedures and equipment involved.

NICU Nurse Skills Training - General. This course provides instruction in the management of the neonatal airway. Designed for pediatric NICU nurses, the course provides detailed instruction sessions, alternated with simulations that use a newborn manikin and focus on both the resuscitation procedures and equipment involved.

Nurse New Grad Orientation. This course is designed to teach new nurse graduates important teamwork and communication skills. Nurses begin the day with a lecture, followed by instruction in patient management and an introduction to the human patient simulator.

Nurse Skills Training. These courses teach nurses how to correctly handle and treat difficult situations such as ventricular fibrillation. Content covers a number of important scenarios and emphasizes teamwork and communication skills. Topics include: Procedural Sedation and Spinal Care.

OB Nurse Skills Training. This course teaches obstetric nurses how to correctly handle and treat difficult situations for an OB patient. Content covers a number of important scenarios and emphasizes teamwork and communication skills.

OR Nurse Simulation Training. OR nurses are taught basic principles of interprofessional team communication and function in simulated full scale patient emergency scenarios. The simulation begins with a nurse finding the standardized patient unresponsive, and is forced to call a code blue response team to the operating room.

Resource Team Nurse Simulation Training. These courses teach nurses how to correctly handle and treat difficult situations such as ventricular fibrillation. Content covers a number of important scenarios and emphasizes teamwork and communication skills.

OB/GYN

Capstone OBGYN Skills. ISIS provides procedural training in obstetric skills for 4th year medical students as part of the year-end practicum along with a lecture. Students review essential skills learned throughout medical school and clinic based training as they make their transition to residency. The class starts with a short overview of the procedures including an introduction to the anatomy, tools used and techniques, followed by hands-on training. Topics include: D&C Workshop, Episiotomy Repair, Knot Tying/Suture Essentials, Laparoscopic Skills, NSVD/IUPC/Fetal Scalp, Pelvic Exam Workshop, Shoulder Dystocia Delivery, Vacuum Extraction Lecture, and Wound Closure.

OB/GYN Med Student Skills Lab. This course is designed for medical students beginning their OB/ GYN clerkship. The class introduces them to instrumentation, anatomy, terminology and basic techniques and procedures including: Pelvic Exam, Standard Vaginal Delivery, and Episiotomy.

OB/GYN Resident Simulation Training – Breech Birth. This course demonstrates the proper way to manage breech birth during delivery. The class starts with a short overview including a review of the anatomy, tools used and techniques, followed by hands-on training with simulators. The class is attended by OB/ GYN residents.

OB/GYN Resident Simulation Training – Crash C-Section. This course focuses on correctly assessing a patient and managing an emergency C-Section. OB/GYN residents are the target audience.

OB/GYN Resident Simulation Training - Disclosure. This course, involving a standardized patient, focuses on disclosing a medical error to a patient and/or family member. The target audience is OB/GYN residents.

OB/GYN Resident Skills Testing. This course is designed to evaluate OB/GYN residents on their abilities and skills learned during the training. Topics include: Episiotomy Repair, Hysteroscopy, Urethral Sling Procedures, and Shoulder Dystocia. Additionally, laparoscopic workstations are set up for a wide variety of general surgical skills.

OB/GYN Resident Skills Training. This course is comprised of a number of procedural and skills-based stations. Training topics include: Episiotomy Repair, Hysteroscopy, Urethral Sling Procedures, and Shoulder Dystocia. Additionally, laparoscopic workstations are set up that allow for practice on a wide variety of general surgical skills.

OB/GYN Simulation Training – Fetal Distress. This course focuses on correctly assessing fetal distress during labor, and treating the situation accordingly. Medical students and OB/GYN residents attend this training.

OB/GYN Simulation Training – Post-Partum Hemorrhage. This course demonstrates the proper way to manage post-partum hemorrhage. The class involves a didactic training and simulation scenarios, and is attended by medical students and OB/GYN residents.

OB/GYN Skills Training - Shoulder Dystocia. This course demonstrates the proper way to manage shoulder dystocia during delivery. The class starts with a short overview including a review of the anatomy, tools used and techniques, followed by hands-on training with simulators. The class is attended by nurse midwives and OB/GYN residents.

Ophthalmology

Ophthalmic Microsurgery & Suturing. This course teaches Ophthalmology residents skills and principles specific to microsuturing. Using a surgical microscope, the residents are given one-on-one time with the instructor to develop and improve their skills.

Ophthalmology Skills Training. This course involves a lecture to teach ophthalmology faculty new procedures and research. Afterwards, physicians have the opportunity to work on cadavers and simulators to practice procedures with new instrumentation and devices.

Orthopaedics and Sports Medicine

Orthopaedic Resident Skills Training. This course incorporates a weekly series of didactic lecture topics with frequent hands-on skills practice in the ISIS wet-lab. The series is designed for orthopaedic residents. Topics include: Hand/Sports Medicine Lab and Shoulder Arthroscopy.

Orthopaedics Resident Lecture. This course incorporates a weekly series of didactic lecture topics with frequent hands-on skills practice in the ISIS wet-lab. The series is designed for orthopaedic residents. Topics include Hand/Sports Medicine Lab, and Shoulder Arthroscopy.

Otolaryngology

Introduction to Airway for Otolaryngology. This course teaches the basic principles of airway management. Students first attend a lecture, followed by hands-on training on airway simulators. Students learn about the anatomy of the airway, proper management before, during and after surgical procedures and emergency management.

Otolaryngology Skills Training. The University of Washington Department of Otolaryngology sponsors an annual course on facial plastic and reconstructive surgery, rhinology and endoscopic sinus surgery. The target audience for this course is our internal and community physicians.

Pediatrics

Pediatric Fellow Anesthesia Skills Training. These courses teach fellows advanced skills to correctly handle and treat a pediatric airway. The class starts with a short overview of the procedures including an introduction to the anatomy, tools used and techniques, followed by hands-on training. Intubation manikin simulators are used to provide lifelike anatomy and feel.

Pediatric Resident Anesthesia Skills Training. These courses teach residents advanced skills to correctly handle and treat a pediatric airway. The class starts with a short overview of the procedures including an introduction to the anatomy, tools used and techniques, followed by hands-on training. Intubation manikin simulators are used to provide lifelike anatomy and feel.

Pediatric Resident Neonatal Mock Resuscitation. This course provides instruction in the management of neonatal respiration and resuscitation. Designed for pediatric residents, the course provides detailed instruction sessions, alternated with simulations that use a newborn manikin and focus on both the resuscitation procedures and equipment involved.

Plastic Surgery

Plastic Surgery Skills Training. The University of Washington sponsors an annual course on facial plastic and reconstructive surgery, rhinology and endoscopic sinus surgery. The target audience for this course is internal and community physicians.

Pulmonary and Critical Care

Advanced Airway for Pulmonary Medicine. This course focuses on the importance of proficient airway management. Lecture material and simulation training are dedicated to the anatomy of the airway and hands-on skill practice focused on the identification and assessment of the patient airway.

Pulmonary/Critical Care Resident Skills Training - Orientation. These courses are designed to teach residents the skills needed to correctly handle and treat various airway scenarios. The class begins with a short overview of procedures including an introduction to the anatomy, tools used and techniques, followed by hands-on training.

Radiology

Radiology Skills Testing. This course evaluates radiologists on their management and response to scenarios involving a contrast reaction. Participants first take a test, followed by an introduction to the manikin simulation procedures. Emphasis is placed on participants correctly identifying the problem, developing an appropriate treatment plan, and effectively delivering medications.

Radiology Skills Training. This course evaluates radiologists on their management and response to scenarios involving a contrast reaction. Participants first take a baseline test of knowledge, followed by an introduction to the manikin simulation procedures. Emphasis is placed on participants correctly identifying the problem, developing an appropriate treatment plan, and effectively delivering medications.



ISIS ROUTINELY UTILIZES MANIKINS SUCH AS SIMMAN 3G, A HIGH-FIDELITY MANIKIN WITH VARIOUS PHYSIOLOGIC AND ANATOMIC FEATURES SUCH AS PALPABLE PULSES, A RISING CHEST, SECRETIONS, BLINKING EYES WITH PUPIL DILATION, AUDIBLE HEART AND LUNG SOUNDS, AND THE ABILITY TO REACT TO ADMINISTERED DRUGS.

Respiratory Therapy

Respiratory Therapy Skills Training. This course focuses on the importance of proficient airway management. Lecture material and simulation training is dedicated to the anatomy of the airway and hands-on skill practice focused on the identification and assessment of the patient airway. Topics include: Advanced Respiratory and Codes.

Surgery

Medical Students Intro to Surgery Skills. This course teaches the essential elements of suturing. Students learn a variety of suturing techniques and practice on a variety of artificial tissues that provide realistic texture and suture support.

Open Surgical Skills. This course is designed to teach surgery residents the key elements of surgical suturing. Residents learn a variety of suturing techniques and practice on a variety of artificial tissues that provide realistic texture and suture support. Many course sessions include an e-learning component, where the course materials are available online with video instructions for each skill. Topics include: Hemostasis, Instrument Handling, Knot Tying, Wound Closure I, and Wound Closure II.

Surgery Resident Skills Training/Testing. This course is designed to evaluate surgery residents on the essential elements of surgical suturing. Residents learn a variety of suturing techniques and practice on a variety of artificial tissues that provide realistic texture and suture support.

Vascular Surgery Physicians Skills Training. This course is designed for vascular surgeons to practice a wide array of vascular skills such as small vessel repair.

Surgery Fellows Cardiothoracic Skills Training. This series of courses covers a wide range of cardiothoracic scenarios such as: cardiopulmonary bypass, aortic valve replacement and coronary artery bypass grafts. Additionally, topics cover crises during aortic dissections, such as air embolus and sudden cardiac function deterioration.

Urology

Robotic Skills Training. This course involves either the daVinci robot and backpack, or the MIMIC simulator to improve robotic surgical skills such as needle control, needle driving, energy and dissection.

Research and Development Committee



Mika Sinanan, M.D., Ph. D.
Chair, Research and
Development Committee

Professor, Surgery

Overview

The ISIS Research and Development Committee (R&D) includes over 30 members from a variety of departments and programs at the University of Washington and is headed by Mika Sinanan, MD, PhD, Chair, ISIS R&D and President of UW Physicians, and Co-Chaired by Thomas Lendvay, MD, Associate Professor, Urology.

Mission

The Research and Development Committee will:

- Advise the ISIS Executive Committee on research, validation and development that will implement ISIS strategic plans.
- Oversee research and development activities within ISIS.
- Develop research proposals for ISIS.
- Interface/partner with industry and others to establish research and development platforms.

Congressional Funding

In FY09, ISIS secured a congressional directed appropriation for over \$3.8 million and in 2010, ISIS received optional continuation funding for \$4.054 million. This project partners the University of Washington with Madigan Army Medical Center's Anderson Simulation Center in the development of innovative ventures for distributed skills training, individual healthcare provider training programs, and team training with continuity of care.

Projects

The R&D Committee works on a wide array of projects, each project falling into one of four categories: 1) simulator and curriculum validation studies; 2) skills and technology assessment; 3) surgical robotics; or 4) training via telemedicine and virtual environments.

Simulator and Curriculum Validation Studies

CVC Training

Pilot Program Leads: Mika Sinanan, MD, PhD;
Andrew Wright, MD

Complications due to Central Venous Catheter (CVC) placement cost UWMC hundreds of thousands of dollars each year, which are not covered by Medicare. In 2008, ISIS developed and enacted a CVC training program for all providers that place CVCs within the UWMC system. Testing and training for this USAMRMC Congressional project include an online cognitive module and using a simulated tissue at the ISIS training centers for maximum fidelity.

Chest Procedures

Pilot Program Leads: Amy Morris, MD; Thomas Varghese, MD

The purpose of this pilot program is to develop and assess curriculum for surgical chest tube insertion and thoracentesis. This USAMRMC Congressional project will also include a battlefield adaptation of all curricula, so that its applicability will extend across civilian and military sectors.

EventDoc™ System

Pilot Program Lead: Brian Ross, PhD, MD

Inconsistencies and omissions in the documentation of emergency procedures can result in harm to patients and increased costs of care. The EventDoc™ project, funded by USAMRMC, aims to implement simulated emergencies to evaluate, select, and modify existing technology and devices for their application in the proposed mission of capturing multiple data elements during a clinical operation.

HD Video Endoscopy

PIs: Michael Wu, MD; Mika Sinanan, PhD, MD

High-definition (HD) video technologies have been widely adopted in recent years replacing standard-definition (SD) technologies in endoscopic instrumentation. These technologies offer greater pixel resolution, but have not yet been tested whether this translates to an improvement in clinically relevant measures, such as color discrimination and contrast sensitivity.

ISIS researchers aim to evaluate and compare the quality of these measures in HD and SD video-endoscopic units.

Improving Patient Safety through Leadership and Team Performance in Simulations

PI: Rosemarie Fernandez, MD

This AHRQ project seeks to improve teamwork in emergency healthcare teams by evaluating the impact of team member familiarity and leadership training on healthcare team performance using simulation-based assessment. Medical emergency teams present significant risks to patient safety due to their inherent design, the nature of their tasks, and the environment in which they function. The evidence-based simulation-based assessment approach used in this research can be applied to address some of the assessment and outcomes challenges reported in the healthcare team literature. Additionally, the leadership-targeted training addresses many of the feasibility and sustainability issues present in large-scale team training programs (e.g., TeamSTEPPS). Finally, the use of theoretically and empirically supported leadership and team processes means this work is compatible and synergistic with currently existing teamwork and patient safety interventions.

Interprofessional Team Training

PIs: Brian Ross, PhD, MD; Brenda Zierler, PhD, RN, FAAN

Effective communication is essential to high quality, patient-centered healthcare. At present, however, few training programs exist to teach these interprofessional communication skills and most existing curricula in this field are directed only towards practicing clinicians, not students or trainees. The University of Washington Schools of Medicine, Nursing, and Pharmacy have been granted funding from the Josiah Macy Jr. Foundation and Hearst Foundation to both develop and validate an innovative simulation-based team training program that fosters collaborative interprofessional communication between all healthcare professionals and their patients. Another aspect of this project is the development and validation of standardized tools that can evaluate and assess team communication and performance.

Percutaneous Suprapubic Catheter Insertion

Pilot Program Lead: Thomas Lendvay, MD

Percutaneous catheter placement procedures - suprapubic bladder catheter placement, thoracentesis, paracentesis, epidural placement, and central venous line placement - are widely utilized for the care of pediatric and adult patients. The placement of a suprapubic catheter (PSC) is an important tool in managing battlefield trauma where perineal or pelvic injuries lead to

disruption of the urethra. Currently, trainees typically perform the placement of percutaneous catheters after discussion with an attending, but this clinical supervision may not be optimal. The goal of this USAMRMC Congressional funded project is to create and validate a curriculum for the standardization of PSC placement for military and civilian health professionals.

PRONTO International

PI: Dilys Walker, MD

ISIS is collaborating with the University of Washington Department of Global Health, Department of Obstetrics and Gynecology, and PRONTO International to assist with the implementation of obstetric and neonatal emergency training programs in limited-resource settings throughout Mexico, Guatemala, and Kenya. Training programs utilize low-tech, high-fidelity simulations involving Parto Pants™ and focus on the management of obstetric emergencies and interprofessional communication, in an effort to support humanized birth experiences for women and their families.

Simulator Based Cardiac Surgery Training

PIs: Nahush Mokadam, MD

The UW School of Medicine is involved in a multi-institutional cardiac surgery resident training program that seeks to improve both learner comprehension and proficiency in cardiac surgical skills. Competency in these skills requires extensive and deliberate practice with a thorough understanding of instrument use, tissue handling, and managing adverse situations. Utilizing simulated and animal tissues in conjunction with the high-fidelity Ramphal Cardiac Surgery Simulator, residents are able to train on a realistic platform to perfect their cognitive and surgical proficiencies. Upon completion of the training program, residents will be shown to be able to perform all required surgical steps for the initiation and completion of various cardiac procedures. This research project is a subcontract through the University of North Carolina.

Skills Acquisition in Single Incision Laparoscopic Surgery

PIs: Andrew Wright, MD; Carlos Pellegrini, MD, FACS, FRSCI (Hon.); Renato Soares, MD; Saurabh Khandelwal, MD; Brant Oelschlager, MD; Roger Tatum, MD

Single Incision Laparoscopic Surgery (SILS) is a modification of the standard technique in minimally invasive surgery. This newer method allows surgeons to perform the same procedures, but use new FDA-approved instruments that permit these operations to be performed through one small (2 cm) incision rather than through the multiple 1-2 cm incisions of conventional laparoscopy, which may offer patients improved recovery periods

and cosmetic results. The amount and type of training needed to use these newer SILS instruments and techniques is not known. ISIS researchers who are investigating how these skills are acquired using the SILS instruments with standardized surgical simulators. This data may help determine what type and how much training should be required before surgeons can be deemed qualified to perform these new procedures safely on actual patients.

Validation Study of Simpraxis Laparoscopic Cholecystectomy Surgical Trainer

PIs: Andrew Wright, MD; Mika Sinanan, MD, PhD; Sara Kim, PhD

Warm-up exercises have been shown to improve subject performance across a variety of skills in multiple professions and some have hypothesized that because surgical performance is both technical and cognitive, practice exercises that stimulate both psychomotor and cognitive centers in our brain may aid in surgical performance and error reduction. This study is currently investigating the use of an online training and preparation module for Laparoscopic Cholecystectomy using a procedure-specific curriculum.

Skills and Technology Assessment

Basics of Open Surgical Skills

PIs: Andrew Wright, MD; Sara Kim, PhD; Karen Horvath, MD; Lisa McIntyre, MD; Kristine Calhoun, MD; Aaron Jenson, MD

An emphasis on competency-based assessments has shifted a significant portion of surgical training from the operating room to the simulation laboratory. Residents who previously learned skills in the OR or skills lab under direct faculty supervision were assumed to be competent after completion of a pre-determined number of cases. Rather than simply using metrics such as time or repetition as proxies, the most widely used assessment today has become the Objective Structure Assessment of Technical Skills (OSATS). Researchers on this USAMRMC Congressional project have been using an OSATS-based, unsupervised expert training course in a simulated environment that is validated to discriminate between novices, junior and senior residents, and expert surgeons.

Cardiac Respiratory Exam

Pilot Program Leads: Karen McDonough, MD; Molly Jackson, MD

Proficient physical assessment skills are critical to providers, both physician and non-physician alike, working in



THE RECONFIGURABLE VIRTUAL OPERATING ROOM AT ISIS-UWMC CAN BE USED FOR TECHNICAL SKILLS TRAINING OR TEAM-BASED SIMULATION SESSIONS.

any healthcare environment from the battlefield to a neighborhood clinic. With increasing limitations on training hours, greatly expanded fields of knowledge and decreasing exposure to hospitalized patients, schools of medicine and allied health often fail to provide opportunities for providers to practice and develop these critical skills. This curriculum, funded by a USAMRMC Congressional grant, is designed to ensure that these skills are developed not only during the initial training process, but also provided for practitioners who have completed their formal training.

Code Blue

PI: Brian Ross, PhD, MD

The UW Patient Safety and Quality Committee has encouraged UW Medicine hospitals to engage in simulation-based training at the “point of care” (*in situ* training). This project aims to restructure the code team, and standardize code blue responses across Harborview and University of Washington Medical Center. UW Medicine’s Patient Safety and Innovations Program has funded this project.

Intrapartum Fetal Monitoring

PIs: Michael Fialkow, MD, MPH; Katherine O’Connell, MN, RN; Leslie Carranza, MD; Lucas McIntyre

The most common precursor to an obstetric emergency is fetal intolerance of labor, which is typically demonstrated by changes in the fetal heart rate. For a newly starting OB/ GYN resident, this event can be among the most stressful experience on the labor and delivery ward (L&D). Proper interpretation and management of the fetal heart rate tracing (FHT) is a critical skill that is traditionally acquired through exposure to static images of FHTs and hands-on clinical experience on L&D. High fidelity trainers allow for the simulation of normal and pathological intrapartum fetal heart rate patterns. This curriculum uniformly educates obstetric providers in the evaluation and management of intrapartum fetal heart rate patterns within a realistic training environment.

Laparo-endoscopic Training

Pilot Program Leads: Andrew Wright, MD; Saurabh Khandelwal, MD; Col. (Ret) Bernard Roth, MD

This training program, part of ISIS’ USAMRMC Congressional grant, has been designed as an advanced curriculum for healthcare providers focusing on laparoscopic and endoscopic procedures during times of reintegration following either military deployment or return from extended leaves of absence. This project is unique in that it addresses the specific needs for re-acquisition and retraining of a fully trained physician rather than initial learning of a novice trainee, which are found to be substantially different.



STUDENTS FROM THE SCHOOLS OF MEDICINE, NURSING, PHARMACY, AND MEDEX PROGRAM PARTICIPATE IN A PEDIATRIC TRAINING, LED BY DR. KIMBERLY STONE, AN ISIS FACULTY MEMBER FROM SEATTLE CHILDREN’S.

Team Training

Pilot Program Lead: Rosemarie Fernandez, MD

The purpose of this pilot program is to use existing curricula for team training to develop a program that emphasizes the “hand-off” between teams of healthcare providers. Errors in medicine resulting in significant complications and poor patient outcomes have been linked to breakdowns in communication and coordination, and deficiencies in team skill application, both within a team (intra-team skills) and between teams during handoff (inter-team skills). Identification and training around these key skills will enhance care in all team care environments. Trainees have a progressive introduction to TeamSTEPPS, starting with introductory concepts and progressing to advanced skills. As trainees become familiar with TeamSTEPPS, the training simulations escalate in complexity and culminate in interdisciplinary training. This project is funded by a USAMRMC Congressional grant.

Toolkits

Pilot Program Lead: Brenda Zierler, PhD, RN

The purpose of this USAMRMC Congressional pilot program is to deliver and disseminate simulation “know-how” and innovations to a wider community, such as the Northwest Simulation Consortium. Tools for this project can be found on the Center for Health Sciences Interprofessional Education, Research and Practice website: collaborate.uw.edu/.

Surgical Robotics

Virtual Reality Warm-Up for Robotic-Assisted Surgery

PIs: Thomas Lendvay, MD; Richard Satava, MD; Timothy Brand, MD

Robot-assisted surgery has become more commonplace in recent years. Products such as the da Vinci Robotic System allow surgeons to perform precise, traditionally invasive operations with greater accuracy, minimal invasiveness, and result in a faster patient recovery time. ISIS is investigating methods of further improving surgical proficiency with the da Vinci surgical robot through warm-up exercises performed on a novel virtual reality robotic simulator platform. This warm-up study received USAMRMC funding.

Training via Telemedicine and Virtual Environments

Intelligent Virtual Cadaver

Pilot Program Leads: James Brinkley, PhD, MD;
John Clark, PhD

ISIS collaborators are developing an intelligent virtual cadaver (IVC) for training learners in preparation for simulation, traditional cadaveric dissection, and surgery. The IVC project, funded by USAMRMC Congressional support, may also serve as a basis for the virtual autopsy, the virtual physiological human, and a visual interface to the medical record on which you can visualize various forms of functional imaging, genomic or clinical trials data.

Boise VA

Pilot Program Lead: Paula Carvalho, MD

The purpose of this program is to test the feasibility and capability of using telemedicine technologies to deliver simulation curricula and training to a distant WWAMI site, such as the Boise VA. This project, funded by a USAMRMC Congressional grant, involves developing and validating curricula for scenarios such as lumbar puncture and central line insertion.

Project Highlight: Virtual Reality Warm-Up for Robotic-Assisted Surgery

Almost 100,000 lives are lost annually to medical errors in the United States, and some of these are surgical. In order to decrease such surgical errors, increased attention has been given to training clinicians through simulation. Simulation training has been a reliable teaching method for skills acquisition, but rarely has it been used for priming existing skills. Athletes, musicians, dancers all warm up before performances, yet surgeons do not do any type of formal warm-up before doing surgery. Furthermore, the military is interested in research that will help identify methods to bring deployed surgeons back to their baseline level of skills when they 'reintegrate' into their civilian or stateside practices. This project generated the hypothesis that surgical simulation could be used to elevate or prime surgical readiness for surgery performance.

Through Department of Defense funding, Dr. Thomas Lendvay, Associate Professor, Urology, and team created a robotic surgery skills curriculum including both virtual reality (VR) and reality based robotic surgery modules and enrolled 51 faculty and residents at Madigan Army Medical



NEUROLOGICAL SURGEONS UTILIZE THE 2,000 SQ. FT. WET LAB SPACE AT ISIS-HMC.

Center and the University of Washington. Gynecology, Urology, and General Surgery mid-level and senior residents, as well as experienced minimally invasive surgeon faculty, underwent an 8-moduled proficiency curriculum to become familiarized with the surgical robot and establish proficiency benchmarks. Once each subject passed the proficiency training, they were randomized into two groups: control or warm-up. The control subjects performed 4 trial sessions on a da Vinci robot criterion task after 10 minutes of pleasure book reading, whereas the experimental group received a 3-5 minute virtual reality robotic simulation warm-up prior to performing the da Vinci criterion task. For the last trial session, instead of the subjects doing the criterion task similar to the virtual reality task, they performed a robotic suturing task testing the hypothesis that a dissimilar virtual reality task could elevate the performance of a real-life suturing scenario. The performance metrics that were assessed – task time, error of technique and cognition, path length of the tools, economy of motion – were tracked with technology developed through collaboration with the Biorobotics Engineering lab at the University of Washington.

It was observed that when measuring task time and surgical tool path length (a surrogate of experience), subjects who warmed up had a performance boost over controls. In addition, experienced surgeons saw a greater degree of performance boost than novices. When testing the suturing trial, subjects were four times more likely to create surgical errors if they had not warmed up. From these data, our institution is planning on integrating surgical robotic warm-up before all robotic surgery cases within UW Medicine.

Patient Safety and Quality

TeamSTEPPS Training

Since 2009, ISIS has been nationally recognized as a TeamSTEPPS training center for Master Trainer Certification. Over the past three years, ISIS has hosted a total of ten national courses, four internal courses for UW Medicine entities, and has trained over 425 Master Trainers. As the only West Coast training facility for the American Hospital Association's Health Research and Education Trust (HRET), ISIS provides TeamSTEPPS communication training for UW Medicine personnel as well as healthcare providers from across the United States.

In addition to the ongoing National Implementation Project sponsored by the Agency for Healthcare Research and Quality (AHRQ) and managed by HRET, ISIS has established itself as a regional training center for institutions within the Pacific Northwest. Supplementing its Master Training courses, ISIS has also provided "Fundamentals of TeamSTEPPS" training to students within the Schools of Medicine, Nursing, Pharmacy, and MEDEX programs during the annual Team-BITS training sessions. In addition, all incoming residents/fellows receive a four-hour introduction to TeamSTEPPS during orientation. Furthermore, TeamSTEPPS principles and techniques are currently being used across multiple departments and programs across UW Medicine and is quickly imbedding itself within the culture of safety.

ISIS has been recongnized as a leader in TeamSTEPPS training innovations with the development of an immersive teach-back training methodology as well as the use of simulation to teach TeamSTEPPS principles of communication.

In-Situ Training

ISIS' in-situ training, or training at the point-of-care, includes the transformation of actual patient care areas into a simulated training environment. By staging simulators in hospital rooms, clinics, and waiting areas, learners are given the opportunity to practice their skills in a realistic and familiar training atmosphere, lessening the gap between practice and reality, and providing increased authenticity of scenario based training. In situ training further allows hospitals and service areas to evaluate their practice based systems. Over the past year, ISIS in partnership with UWMC and HMC, supported over 136 in-situ training events for Mock Code Blue Response, Emergency Medicine Training, and Bleeding Emergencies. Seattle Children's which focuses its simulation education heavily on training at the point of care has held also held in-situ events for a majority of its training events. In addition to these training sessions, other services are being evaluated for opportunities for future in-situ simulation training opportunities.



AFTER A LECTURE ON TEAMWORK AND COMMUNICATION SKILLS, TRAINEES PARTICIPATE IN IMMERSIVE SIMULATION EXPERIENCES TO APPLY THE SKILLS JUST LEARNED IN LECTURE.

Patient Safety Innovations Program (PSIP)

Announced in the spring of 2010 and funded through December 2011, the Patient Safety Innovations Program (PSIP) was designed by UW Medicine through its commitment to providing the highest possible care to its patients. The program encourages the development and evaluation of creative innovations for improving patient safety and was designed to provide pilot funding for innovative research or demonstration projects with the intention to enhance the quality and safety of patient care at University of Washington Medicine.

Over the past year, ISIS maintained three funded projects with the PSIP program, including:

UW Division of Emergency Medicine TeamSTEPPS

PI: Dr. William Hurley

This project focuses on the development of team -training curricula within the Emergency Department at both HMC and UWMC. Faculty and staff practice team communication skills in-situ with one of several produced mock code simulation scenarios. In FY12, ISIS in collaboration with the Emergency Department ran 112 emergent code response training sessions at HMC and UWMC.

An Innovative Multidisciplinary Approach to Code Blue Curriculum Development and Training Aimed at Improving Patient Outcomes – Choosing Havarti over Swiss Cheese

PI: Dr. Brian Ross

The specific aim of the Code Blue project is to review, redesign, and align the Code Blue response process, documentation and training at both the UWMC and HMC facilities through innovation and interprofessional teamwork. FY12 saw formalization of the re-designed Code Blue response, completion of updated Code Blue documentation, and the development and standardization of policies shared across UWMC and HMC. Upon Executive approval, implementation of the newly re-designed Code Blue process and response will include the development of on-line educational materials as well as hands-on training at both facilities allowing for improved patient safety and process evaluation.



ISIS TRAINED AND TESTED 238 FACULTY, FELLOWS, RESIDENTS, AND CRNAS ON CENTRAL VENOUS CATHETERIZATIONS IN FY12 (TOTALING 1,156 TRAINEES SINCE 2008).

Video and Simulation Based Identification, Correction, and Monitoring of Critical Events on the Labor and Delivery Unit

PI: Dr. Michael Fialkow

This PSIP project includes a review of critical events on the UWMC Labor and Delivery Unit. Research staff/faculty will identify areas for improved training and the development of a simulation based training program through systematic review of current event response.

Funding for these three projects totaled \$200,000 and was completed in December 2011. The continued implementation of the work accomplished by these pilot-projects is ongoing and ISIS has committed operational resources for the continued success of these hospital initiatives.

Highlights

Collaboration

Regional Collaboration

Collaboration across UW Medicine entities continues to strengthen support for simulation education and training from administration and hospital leadership. UW Medicine's recent expansion to Northwest Hospital and Medical Center (NWH) has allowed for additional medical student and nursing training opportunities at the facility's Community Health Education and Simulation Center (CHESC). Hospital leadership is currently reviewing course offerings and training foci at NWH to eliminate duplication to the extent possible and to allow for the most efficient and standardized training across the system.

ISIS also continues to foster a collaborative relationship with the simulation training efforts of Seattle Children's hospital. With many faculty shared by UW Medicine, the two entities continue to coordinate training efforts. Seattle Children's Neonatal Resuscitation Certification Program occurs at ISIS, with NRP provider and recertification courses are offered bi-monthly to healthcare providers throughout the region.

In mid-2011, UW Medicine announced the formation of a strategic alliance with Valley Medical Center. As the expansion of UW Medicine to Valley Medical Center develops, ISIS looks forward to potential collaboration with this South King County medical facility. Furthermore, ISIS works closely with the Centre of Excellence for Surgical Education and Innovation (CESEI) at the University of British Columbia, and Oregon Health and Science University's (OHSU) Clinical Learning Center to improve the quality of healthcare education beyond Washington State within the Pacific Northwest.

ISIS maintains a long interest in trialing and migrating innovative simulation techniques and curriculum to areas in need. By using the five-state geographically diverse WWAMI region as a test platform, ISIS has begun to identify training programs that might be applicable abroad, most specifically aimed at the training needs of low-middle-income countries.

Lastly, the Puget Sound area encompassing Seattle is a hub of biotech innovation that continues to fuel ISIS with many research and development opportunities with industry. ISIS is well positioned to have a significant impact on the quality of simulation education throughout the region and internationally.

International Collaboration

ISIS recently began collaborating with the UW Department of Global Health, UW Department of Obstetrics and Gynecology and PRONTO International. This partnership aims to assist with the implementation of obstetric and neonatal emergency training programs in limited-resource settings throughout Mexico, Guatemala, and Kenya. Training programs utilize low-tech, high-fidelity simulations involving PartoPants™, which were invented by Pronto International. Trainings focus on the management of obstetric emergencies and interprofessional communication in an effort to support humanized birth experiences for women and their families.

In January 2012, members of the ISIS staff and research faculty joined a medical team in Catacamas, Honduras. The two members from ISIS, in addition to other healthcare providers from the United States, partnered with an organization called Healing the Children International, which provides medical care to children in need. The members from ISIS participated in the medical trip to help treat children and to train local physicians.

Individuals & Academics

ISIS regularly conducts tours for a wide variety of individuals. Some of the FY12 visitors included:

- Congressional staffers representing congressmen Dicks, Senator Begich, and Senator Crapo.
- Dr. Chris Munsch, Visiting Cardiothoracic Surgeon
- Dr. Edward Kim, University of California San Francisco
- Dr. Greg Gatchell, Dr. Lisa Gibbs, and Dr. Sonia Sehgal, University of California Irvine
- Dr. Kyla Terhune, Vanderbilt University
- Dr. Richard Wall, Valley Medical Center
- Dr. Vedprakash Mishra and Dr. Zahir Quazi, Datta Meghe Institute of Medical Sciences
- Ethiopian Health Delegates
- Executive Leadership from Alaska Airlines: Brad Tilden, Ben Minicucci, Gary Beck, Fred Mohr, and Peggy Willingham
- Executive Leadership from Northwest Hospital and Medical Center: Dr. Gregory Schroedl, Bill Schneider, and Jacob Fleet
- Michelle Tranquili, Legislative Aide to Congressman Dave Reichert
- Nelson Del Rio, Friend of UW Community
- Representatives from the University of Nairobi
- Scott Berfield, UW Bothell
- Simulab
- Thai Health Officials
- UW Masters in Health Administration Student Tour
- UW School of Medicine Resident Applicants

Community Outreach

ISIS supports a dynamic outreach program to middle and high school students, in addition to college students with an interest in the health sciences. ISIS is a core participant in Harborview Medical Center's Community Internship Program, which familiarizes community leaders from government, finance, industry, and non-profit organizations with the cutting-edge research, innovations and obstacles of Harborview Medical Center. ISIS representatives also participate in UW Medicine's Mini Medical School program, a six week lecture series open to the public, in addition to Dawg Daze, an event which introduces incoming undergraduates to the exciting academic and extracurricular opportunities at the University of Washington. Such community outreach is a cornerstone of ISIS' mission to provide hands-on healthcare training to a diverse audience of individuals, both within the University of Washington and to the broader community.

ISIS supports the need for science education within youth and school programs. ISIS works closely with the University of Washington's News and Community Relations to schedule a monthly tour to various schools and educational programs. The educational visits for FY12 included:

- Anacortes High School Tour
- Central Kitsap High School
- Decatur High School
- Foster High School

- Sammamish High School
- Seattle Academy of Arts and Sciences
- Snohomish High School
- St. Thomas Moore School
- UW Alpha Epsilon Delta
- UW American Medical Student Association
- UW Bioengineering Undergraduate Student Tour
- UW College of Education
- UW Department of Anesthesiology Staff Members
- UW Department of Global Health
- UW Department of Pathology
- UW Department of Surgery- SORCE: Surgical Outcomes Research Center, Staff Members
- UW Future Champions Program
- UW Information Management Staff
- UW Library Sciences Graduate Students
- UW Multicultural Affairs: Connex Group
- UW Multicultural Affairs: Future Champions Program
- UW Neurobiology Undergraduate Students
- UW Nursing Summer Camp
- UW Summer Medical Dental Education Program
- UW Transfer Student Biology Interest Group
- UWMC Volunteer Tour
- Wings of Karen Foundation



ISIS SUPPORTS A ROBUST COMMUNITY OUTREACH PROGRAM, PROVIDING INTERACTIVE TOURS TO A DIVERSE AUDIENCE WHICH RANGES FROM ELEMENTARY SCHOOL CHILDREN TO HEALTHCARE LEADERS AND CEO'S. HERE DR. BRIAN ROSS TEACHES INTUBATION TO COMMUNITY LEADERS.

Accepted Abstracts and Manuscripts

ISIS faculty continues to generate scholarly products as directly related to ISIS curricular activities. Samples of FY12 publications and presentations are listed below:

- Abu-Rish, E. Kim, S., Choe, L., Varpio, L., Malik, E., White, A., Craddick, K., Blondon, K., Robins, L., Nagasawa, P., Thigpen, A., Chen, L., Rich, J., Zierler, B. Current trends in interprofessional education of health sciences students: A literature review. *Journal of Interprofessional Care*, July 2012.
- Abu-Rish, E. & Zierler, B. Structured Guidelines for Reporting Findings of Interprofessional Education Studies: How and Why to Write an Accompanying Technical Paper. *Collaborating Across Borders III Meeting*, 2011, Tucson, AZ.
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Presentations:

- Peterson, G., Comstock, K., Bremer, J., Thorngate, L., Plitt, K.: *TeamSTEPPS*. Incoming Resident Orientation. Seattle, WA. June 2012.
- Ross, B.: *Partnering with Our Community Hospitals*. Valley Medical Center. Renton, WA. February 2012.
- Ross, B., Ehrmantraut, R., Stone, K., O'Brien, K., Sokol-Hessner, L., Turner, P., Fahey, B., Zierler, B., Hurley, W., Brownstein, D.: *TeamSTEPPS National Training Conference* TeamSTEPPS Master Training Session. Seattle, WA. March 2012.
- Ross, B., Ehrmantraut, R., Verma, S., O'Brien, K., Plitt, K., Turner, P., O'Connell, K., Hurley, W., Zierler, B., Cottingham, C., Reid, J.: *TeamSTEPPS National Training Conference*, TeamSTEPPS Master Training Session. Seattle, WA. May 2012.
- Ross, B., Hurley, W., Shannon, S., Turner, P., Odegard, P., Comstock, K., McCotter, P., Carranza, L.: *TeamSTEPPS Training Course*, HealthPact Forum. Seattle, WA. October 2011.
- Ross, B., Hurley, W., Turner, P., Ehrmantraut, R., Cottingham, C.: *TeamSTEPPS*. Incoming Resident Orientation. Seattle, WA. June 2012.
- Ross, B., Plitt, K., Merrill, V., Ehrmantraut, R., Carranza, L., Hurley, W., Comstock, K.: *TeamSTEPPS Training Conference*, HealthPact Forum. Seattle, WA. February 2012.
- Ross, B., Shannon, S., Plitt, K., Hurley, W., Odegard, P.: *TeamSTEPPS Training Conference*, HealthPact Forum. Vancouver, WA. January 2012.
- Zierler, B., Ross, B.: *Macy Faculty Development Workshop*. Seattle, WA. March 2012.
- Zierler, B.: *Coach/Facilitation and Debriefing*. Macy Faculty Development Workshop. Seattle, WA. March 2012.
- Ross, B.: *TeamSTEPPS- The Basics* Macy Faculty Development Workshop. Seattle, WA. March 2012.
- Zierler, B.: *Team Based Competencies: Building a Shared Foundation for Education and Clinical Practice*. Invited Participant. Sponsored by Health Resources and Services Administration (HRSA), the Josiah Macy Jr., and Robert Wood Johnson Foundation and the ABIM Foundation. Washington, DC. February 2012.
- Zierler, B.: *All Health Professions Training: Communicating Across Silos. Symposium on Implementation of Recommendations from the Lancet Commission Report on the Education of Health Professionals for the 21st Century*. Invited Speaker, Global Health Consortium. Montreal, Canada. November 2011.
- Zierler, B.: *Mainstreaming IPE by Leveraging Existing Faculty Development Resources: IPE Teaching Scholars Program*. Collaborating Across Borders III. Tucson, AZ. November 2011.
- Zierler, B.: *Faculty Development in Interprofessional Team-based Care*. Faculty Development Workshop at the University of Washington. Seattle, WA. March 2012.
- Zierler, B.: *Interprofessional Education and Practice: Preparing Master's Students*. AACN Master's Education Conference. San Antonio, TX. March 2012.
- Zierler, B.: *Interprofessional Education and Collaborative Practice: Future for Nursing*. AACN Annual Spring Meeting. Washington, DC. April 2012.
- Zierler, B.: *The Use of Simulation to Facilitate Interprofessional Education and Practice*. University of Pennsylvania's Symposium on Interprofessional Education and Practice. April 2012.
- Zierler, B.: *Interprofessional Education and Collaborative Practice*. Visiting Scholar. University of California, Irvine. May 2012.
- Zierler, B.: *Interprofessional Education*. 2012 UW School of Nursing Soule Lecture: Panel on Promoting Health Through Collaboration– Team-based Science and Practice. May 2012.
- Zierler, B.: *Interprofessional Education and Practice: Resources (People, Places, and Things)*. Interprofessional Education (IPEC) Institute. Herndon, VA. June 2012.
- Zierler, B.: *Opportunities and Challenges of IPE*. American Physical Therapy Association Meeting: Presentation and Panel Discussion for IPE and Interprofessional Practice. Tampa, FL. June 2012.
- Zierler, B., Prouty, C., Ehrmantraut, R., Plitt, K., Merrill, V., McCotter, P., Cottingham, C., Carranza, L., O'Brien, K., Odegard, P., Comstock, K.: *TeamSTEPPS Training Course*, HealthPact Forum. Seattle, WA. December 2011.



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