and better coordinate research results and evidence into clinical practice. This type of coordination and collaboration is often required to successfully compete for comparative effectiveness research grants and it also provides a mechanism for the mentoring of faculty and new investigators to be successful in this type of research.

The first seminar in the series, “The role of implementation science in Comparative Effectiveness Seminar Series”, had its kickoff in September 2014. A goal of this seminar series is to unite multiple investigators from a variety UNMC colleges and disciplines to identify gaps in medical knowledge and prioritize areas for comparative effectiveness research. This seminar series can provide a forum through which investigators can learn more about the different types of comparative medicine research that is occurring on campus,
Matthew Goede, MD, is an Assistant Professor of Surgery at UNMC, a Minimally Invasive and Critical Care Surgeon in the General Surgery Department, and is a member of CAST. In addition to his roles at UNMC, Dr. Goede is also a part of the surgical team at the Veterans Affairs Medical Center in Omaha. The VA has implemented an innovative technology which allows him to be in multiple places throughout the VA system at the same time: Tele-Intensive-Care Unit, or TICU.

This technology allows for an instantaneous live video, audio, and telemetry feed to any ICU room covered by the program. Currently the program covers three VISNs (regions) over 9 states, supporting 13 ICUs. In addition to the live video and audio, the patient’s heart rate, charts, and other vital information is displayed. The TICU system allows hospitals to contact to a central hub where intensive care specialists are able to assist the doctors and nurses on staff and provide patient care over the telecommunications link. It also allows for patients in ICUs to receive the best possible care, without having the risk being transported to a different hospital or waiting for a trained specialist to arrive. It also allows the presence of an critical care specialist to rural areas that cannot support a critical care specialist themselves. Due to these advantages, the TICU system is capable of decreasing patient and hospital costs, the average length of stay, and the mortality rate. The TICU system allows for trained intensive care specialists to be “bedside” almost instantly in the event of an emergency, even if they are physically hundreds of miles away. This technology has the potential to provide solutions to the unique medical problems that affect rural and less populated areas. It also has potential to be used in a military setting or medical emergencies overseas. It even could be used to provide remote care in outer space, making long-term space exploration more feasible. The possibilities of this new technology are only beginning to be explored.

Comparative Effectiveness Seminar Series (continued)

Comparative Effectiveness Research” was presented by Katherine Jones, PhD, from the UNMC School of Allied Health Professions’ physical therapy education division. Dr. Jones discussed the difficulties involved in applying what is learned in comparative research to the actual practice of medicine and presented concrete steps to improve implementation. The second seminar was presented by Monirul Islam, MD, PhD entitled, “Lessons Learned about Patient-Centered Outcomes Research (PCOR) in Advanced Lung Cancer Patients”. The seminar also included presentations from Apar Ganti, MD, a practicing oncologist, and June Ryan, a patient advocate. They showed that some patients prefer palliative care to aggressive therapy and that these patients actually had better one-year survival rates. Anyone with questions about the Comparative Effectiveness Research at UNMC or ideas for collaboration, please contact Marsha Morien (mmorien@unmc.edu or 402-559-4518).

Dr. Goede and the TICU System
The University of Nebraska Foundation concluded its Campaign for Nebraska, which began in 2005, on December 31, 2014. They raised more than $258.1 million in 2014 alone and $1.89 billion in total to fund university priorities such as student scholarships, faculty recruitment, research and program support. CAST members from UNMC, UNL, and UNO were invited to attend and exhibit at the October 24, 2014 Foundation Dinner to celebrate the Campaign and to allow students and faculty to present technology developed by CAST including a miniature surgical robot that was tested on a zero-gravity flight by students from UNMC and UNL.

Dr. Dmitry Oleynikov with Lil’ Red (top), Dr. Shane Farritor (UNL) discussing CAST projects with attendees (left), Dr. Nicholas Stergiou with his team (right).
We are glad to announce that we have received an additional two years of funding from the Department of Defense Telemedicine and Advanced Technology Research Center to pursue robotic telesurgery research with $4.2 million in total funding. This will allow us to continue this research program through at least April of 2017 and bring robotic surgery, robotic telestration and robotic telesurgery that much closer to clinical practice in both military and civilian applications.

In January, members of CAST made presentations at the 2015 NASA Human Research Program Investigators' Workshop to the Exploration Medical Capability and Visual Impairment and Intracranial Pressure sessions on surgical robots, a unique closed-loop oxygenator, surgical skill learning, and non-invasive measurement of intracranial pressure.

Dr. Farritor and I were honored to jointly receive the 2014 IDEA award for our work with CAST. This award is a testament to the hard work of the CAST team and our many students, including National Science Foundation Scholars, and Fellows, at UNMC, UNL and UNO.

CAST is extremely proud of our MIS Fellow, Tammy Kindel, M.D., Ph.D., who was awarded grants from both SAGES (the Society of American Gastrointestinal and Endoscopic Surgeons), and the Clinical Research Center at UNMC for a clinical study, “Effect of Sleeve Gastrectomy on Post-Prandial Serum Bile Acids.”

Sincerely,

Dmitry Oleynikov, M.D., F.A.C.S.,
Professor of Surgery
Chief, Minimally Invasive & Bariatric Surgery
Director Minimally Invasive and Robotic Surgery
Director Center for Advanced Surgical Technology