

The Innovator

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Research is the first step in any new type of surgery

Practicing in a lab space

Performing a surgery is a learned process. Before a new type of surgery is offered at Baystate, it must be researched, tested, and practiced first. Dr. John Romanelli of the Department of Surgery stresses the importance of testing a breakthrough method of surgery before it is applied to patients. Within the past two decades, he has seen several new surgical methods implemented at Baystate; all because of benchtop-to-operating room research.

“Our research lab enables us to test new methods and perfect procedures,” he says. “Without it, we wouldn’t be able to advance the care we provide to our patients as effectively.” Here is some of the surgical research Dr. Romanelli has helped bring to Baystate:

NOTES (Natural Orifice Trans-luminal Endoscopic Surgery)

NOTES is a non-invasive surgical procedure which aims for less post-operative pain. NOTES suggests the idea of using the body’s natural orifices (e.g. the mouth) to take an organ out, rather than making an external incision. NOTES was originally proposed as a replacement for laparoscopic surgery, which uses a laparoscope (a thin tubular camera device) through a small cut, usually in the abdomen. The first instance of NOTES was used during a 2004 surgery in India to remove an appendix through a patient’s esophagus. Dr. Romanelli



Carolanne Lovewell, RLATG, CPIA, Director of the Baystate Research Facility, Dr. John Romanelli, and Alexander Dufresne, RLATG of the Baystate Research Facility.

came to Baystate around this time and worked on surgical models to perform NOTES.

“Trying to do [NOTES] surgery with tools through an endoscope is like trying to mow your lawn with a pair of scissors,” says Dr. Romanelli. “With NOTES, we needed to develop an entire new generation of instruments for endoscopic surgery.”

Testing NOTES through the NOVEL trial (Natural Orifice vs. Laparoscopy)

After learning how to do the NOTES procedure in the lab setting with the proper tools and obtaining approval from the IRB, Baystate was invited to participate in the multi-center NOVEL trial in 2014 to compare the new technique versus laparoscopy for gallbladder removal. This trial tested the methods of NOTES to ensure they were ready to be implemented on patients.

“The NOVEL trial proved that it was safe to perform the NOTES procedure in patients,” says Dr. Romanelli. “Through the NOVEL trial, we discovered that NOTES cholecystectomy produces equal results to a laparoscopic procedure.”

POEM (Peroral Endoscopic Myotomy for achalasia of the esophagus) procedure

Another operation that Dr. Romanelli helped bring to Baystate is called POEM, meant to treat the symptoms of achalasia [of the esophagus]. Achalasia is a condition in which the muscles of one’s esophagus do not relax, causing discomfort when eating or drinking. Achalasia can be remedied with minimally invasive surgery down the throat where the muscles are cut to relieve tension.

Dr. Romanelli had read about the POEM procedure in a 2010

issue of *Endoscopy*. The paper, written by a Japanese surgeon, described the concept of using tools designed for endoscopy to cut open the esophagus muscles. Intrigued by this paper, Dr. Romanelli and Dr. David Desilets from the Division of Gastroenterology emailed the author and traveled to Japan in 2011 to train with him in the POEM surgery. Over the course of the three days in Japan, Dr. Romanelli observed five POEM procedures. Dr. Romanelli wrote an IRB protocol and took the POEM procedure back to the Baystate lab to practice. Once perfected, Baystate became the third hospital in the U.S. to offer this procedure.

“We have performed POEM on over 100 patients at Baystate [since its implementation],” says Dr. Romanelli. “Patients are even sent here from Boston to receive this procedure. Techniques from NOTES are used in the POEM procedure.”

Benefits of our research lab

“All of these procedures came to fruition at Baystate because of the research we have been able to perform in our research lab,” says Dr. Romanelli. “Using our fully-functional research lab, we are discovering important things and more direct, safe routes to perform certain surgeries. We investigate, ask difficult questions, research, and then apply it to patients. You don’t have to leave western Massachusetts to get complex, advanced care.”

Meet the new Medical Co-Directors of the Human Research Protection Program (HRPP), Robert Baevsky, MD and Anna Tsirka, MD

As of October 2019, Baystate Health has two Co-Directors of the HRPP. Drs. Bob Baevsky and Anna Tsirka will be responsible for oversight of research studies and education. This is the first time Baystate has had two leaders simultaneously serving in this position.

Anna Tsirka, MD

Dr. Tsirka is a physician at Baystate Pediatric Cardiology, Assistant Professor of Pediatrics at University of Massachusetts Medical School-Baystate, and Director of the Fetal Cardiology Program and Pediatric Echocardiography Lab at Baystate. She has been with Baystate since 2006 and has been based at 50 Wason Ave. in Springfield since 2013. She became a member of the Baystate IRB in 2006



Anna Tsirka, MD and Robert Baevsky, MD.

and has been the chair of Baystate IRB #1 for the past couple years.

Robert Baevsky, MD

Dr. Baevsky is an attending physician and Director of ED Informatics in the Emergency Department and Trauma Center. He is also an Associate Professor of Emergency Medicine at University of Massachusetts Medical School-Baystate. Dr. Baevsky began his Baystate career in the department of Emergency Medicine in 1993. He has been chair of Baystate IRB #2 since 2011.



Select Recent Awards

ACADEMIC AFFAIRS

KEVIN HINCHEY, MD, 2020 AHEC Center. UMMS, HRSA.

Parenting from the Inside Out Training. Square One, MA Dept. Of Public Health.

CARDIAC SURGERY

DANIEL ENGLEMAN, MD, Randomized comparison of the clinical Outcome of single versus Multiple Arterial grafts: the ROMA trial. Cornell University, Sunnybrook Research Institute.

INFECTIOUS DISEASE

DANIEL SKIEST, MD, FY20 NEAETC. Community Research Initiative NE, HRSA.

DURANE WALKER, MD, FY20 HEP-C Training. Community Research Initiative NE, MA Dept. Of Public Health.

CARDIOLOGY

GREGORY GIUGLIANO, MD, A Double-blind, Randomized, Placebo-controlled, Multicenter Study to Evaluate the Impact of Evolocumab on Major Cardiovascular Events in Patients at High Cardiovascular Risk Without Prior Myocardial Infarction or Stroke. Amgen, Inc.

NEUROLOGY

GOTTFRIED SCHLAUG, MD, (TRANSPORT2) Salary Support Activity. Duke University, NIH.

OB/GYN

NEENA QASBA, MD, Society of Family Planning Research Fund (SFPRF) 2019 - 2020. Society for Family Planning.

ONCOLOGY

WILSON MERTENS, MD, Bristol-Myers Squibb: Observational study protocol CA209-8XR comparison of diagnostics, treatments, and health care utilization for cancer patients treated in practices participating in the oncology care model (OCM) versus not participating in OCM. Premier Healthcare Solutions, Inc., Bristol Myers Squibb.

AMIR LOTFI, MD, Impact of Wire Sensor Location on Coronary Physiological Measurement. Opsens, Inc.

AMIR LOTFI, MD, Computational fluid dynamic model using Proper Orthogonal Decomposition-Technique to Simulate Pressure Drop across Coronary Stenosis. Boston Scientific Corporation.

CRITICAL CARE

VICTOR PINTO-PLATA, MD, Network Management Core (NEMO) for the pulmonary Trials Cooperative (PTC) - INSIGHT Study administrative change of sponsor and sponsor type. COPD Foundation, Inc., NIH.

PEDI ENDO

KSENIA TONYUSHKINA, MD, Partnership between Springfield Public School Nurses and Baystate Pediatric Diabetes Program to Enhance Diabetes Care for Children with T1DM from a Disadvantaged Population. Tufts University.

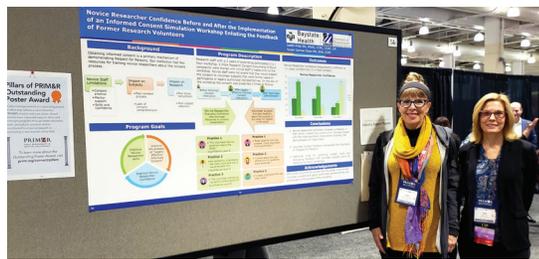
JAY STEINGRUB, MD, Influenza Vaccine Effectiveness for Preventing Laboratory-Confirmed Severe Influenza-Associated Illness in US Adults. Vanderbilt University Medical Center, CDC.

HCQ

ELIZABETH PEACOCK-CHAMBERS, MD, First Steps Together

Susan Garrow-Sloan and Judith Pride win poster award at the 2019 Advancing Ethical Research Conference

Congratulations to Susan Garrow-Sloan, RN, BSN, CCRP and Judith Pride, RN, MSHS, CCRC, CCRP, CIP for their abstract "Novice Researcher Confidence Before and After the Implementation of an Informed Consent Simulation Workshop Enlisting the Feedback of Former Research Volunteers." The abstract was accepted for display as a poster at the 2019 Advancing Ethical



Susan Garrow-Sloan, RN BSN, CCRP and Judith Pride RN, MSHS, CCRC, CCRP, CIP with their poster at the conference.

Research Conference (AER19) in November 2019 at the Hynes Convention Center in

Boston, MA. The abstract also earned the Pillars of PRIM&R Outstanding Poster Award.

Baystate researchers lead \$10 million study of opioid use disorder treatment in Massachusetts jails

Over 12 million people annually in the U.S. are released from jail. Opioid use disorder (OUD) is highly prevalent, and transition back to the community is a high-risk time for overdose. Medication for OUD is a highly effective means to reduce overdose deaths. JCOIN, which stands for Justice Community Opioid Innovation Network, is part of the National Institutes of Health's \$948 million HEAL (Helping to End Addiction Long-term) initiative. Baystate's regional

campus of the University of Massachusetts Medical School (UMMS-Baystate) has received one of ten JCOIN awards nationwide, focused on improving care for OUD in criminal justice settings.

"JCOIN will study implementation of resources to help inmates with OUD," says Randall A. Hoskinson, Jr., Director of Research Development & Special Initiatives at UMMS-Baystate. Hoskinson, along with Baystate's Dr. Peter Friedmann and Dr. Elizabeth Evans at

UMass Amherst, is leading the Massachusetts (MA-JCOIN) effort.

In 2018, Massachusetts' legislature mandated a 4-year pilot to provide medication for OUD at seven county jails.

"This novel pilot provides an opportunity to examine effectiveness and costs of medication for OUD in jails," says Friedmann, "as well as the challenges of continuing medication treatment during community re-entry." The MA-JCOIN study has three aims:

- 1.) To compare treatment outcomes, including overdose and rearrest, associated with the various forms of medication treatment among people with OUD who pass through these jails.
- 2.) To understand the institutional facilitators and barriers to delivery of medication treatment in jail and during community re-entry.
- 3.) To determine the cost and effectiveness of each of the forms of medications in jail from state-policy maker and societal

perspectives.

The MA-JCOIN team is working collaboratively with the seven jails and the Massachusetts Department of Public Health, as well as the national network of JCOIN sites.

"Findings will provide important lessons and best practices for jurisdictions nationwide whose jails seek to implement medication treatment as an evidence-based response to the opioid crisis," says Friedmann.

Notable Recent Published Papers

Contact Baystate's Health Science Library for more information at libraryinfo.bhs.org/home

Schoenfeld EM, Shieh MS, Pekow PS, Scales CD Jr, Munger JM, Lindenauer PK. Association of Patient and Visit Characteristics With Rate and Timing of Urologic Procedures for Patients Discharged From the Emergency Department With Renal Colic. *JAMA Netw Open*. 2019 Dec 2;2(12):e1916454.

Scott SS, Henneman EA, Nathanson BH, Andrzejewski C Jr, Gonzalez M, Walker R, Martinez VI. Use of a Transfusion Checklist by Student Nurses to Improve Patient Safety. *J Nurses Prof Dev*. 2019 Dec 3.

Hrycko A, Tiwari V, Vemula M, Donovan A, Scibelli C, Joshi K, Visintainer P, Stefan MS. A Hospitalist-Lead Team to Manage Patient Boarding in the Emergency Department: Impact

on Hospital Length of Stay and Cost. *South Med J*. 2019 Dec;112(12):599-603.

Farah M, Abdallah M, Szalai H, Berry R, Lagu T, Lindenauer PK, Pack QR. Association Between Patient Cost Sharing and Cardiac Rehabilitation Adherence. *Mayo Clin Proc*. 2019 Dec;94(12):2390-2398.

Bhat AG, White K, Gobeil K, Lagu T, Lindenauer PK, Pack QR. Utility of ICD Codes for Stress Cardiomyopathy in Hospital Administrative Databases: What Do They Signify? *J Hosp Med*. 2019 Dec 23;14:E1-E4.

Tiru M, Kadado AJ, Rastegar V, Shah K, Joshi KK, Lindenauer P, Lagu T, Stefan MS. An observational study of the management practices and outcomes of

patients with new onset atrial fibrillation in non-cardiothoracic surgeries. *Heart Lung*. 2019 Nov 15.

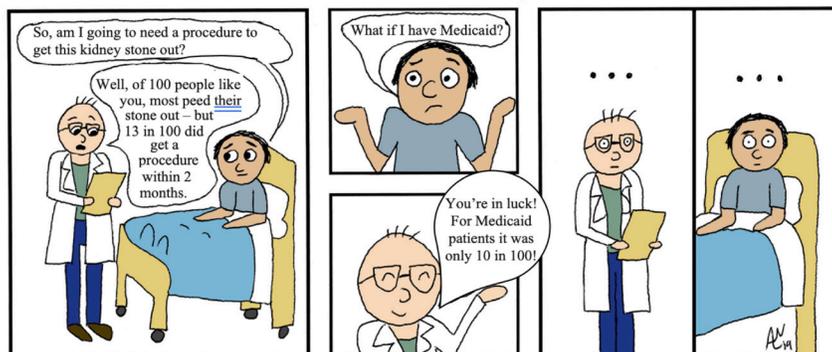
Herzig SJ, Stefan MS, Pekow PS, Shieh MS, Soares W, Raghunathan K, Lindenauer PK. Risk Factors for Severe Opioid-Related Adverse Events in a National Cohort of Medical Hospitalizations. *J Gen Intern Med*. 2019 Nov 14.

Viskochil R, Blankenship JM, Makari-Judson G, Staudenmayer J, Freedson PS, Hankinson SE, Braun B. Metrics of diabetes risk are only minimally improved by exercise training in postmenopausal breast cancer survivors. *J Clin Endocrinol Metab*. 2019 Nov 20.

Dr. Elizabeth Schoenfeld publishes Office of Research's first "graphic abstract"

Can you tell your kidney stone patients the likelihood of a urologic procedure (without getting a CT scan)? Age 18-65, MA residents, 66k ED visits, 4 years of data:

Welcome to our ED! You have a kidney stone. So what next?



Schoenfeld EM, Shieh M-S, Pekow PS, Scales CD, Munger JM, Lindenauer PK. Association of Patient and Visit Characteristics With Rate and Timing of Urologic Procedures for Patients Discharged From the Emergency Department With Renal Colic. *JAMA Netw Open*. 2019; 2(12):e1916454. doi:10.1001/jamanetworkopen.2019.16454

Dr. Elizabeth Schoenfeld of the Department of Emergency Medicine recently published the Office of Research's first "graphic abstract" to accompany her paper "Association of Patient and Visit Characteristics With Rate and Timing of Urologic Procedures for Patients Discharged From the Emergency Department With Renal Colic." Dr. Schoenfeld enlisted the help of Allison Litera, Digital Content Analyst in the Offices of Faculty Affairs and Research at UMMS-Baystate, to illustrate the comic.

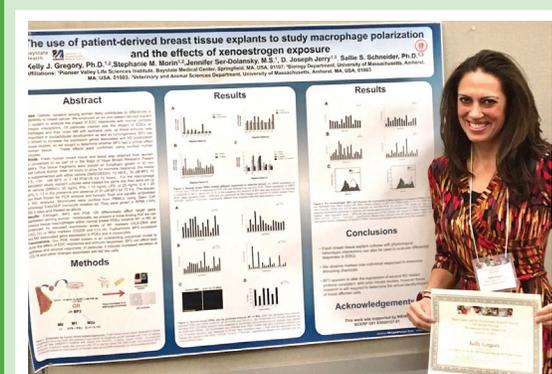
Dr. Schoenfeld describes the abstract: "Baystate researchers used the Massachusetts All Payers Claims Database to look at all patients seen in a Mass ED for kidney stones from 2011-2014. They found that for patients age 18-65, the majority get sent home (treated as outpatients) and most of those patients do not go on to need a urological intervention.

However, the rate of both urological intervention and urology office follow-up was lower for patients with Medicaid. At 60 days, 13% of patients have had a urologic procedure, while this number was only 10% for patients with Medicaid. It is unclear whether this represents overuse for commercially insured patients or underuse for Medicaid patients."

The field of graphic medicine has grown in popularity over the past several years. Graphic medicine is used to portray an otherwise complicated topic in cartoon form. The Baystate Health Sciences Library has a collection of graphic medicine titles for those who are interested.

Contact the Health Sciences Library by calling 413-794-1865 or emailing library@baystatehealth.org to learn more about their collection of graphic medicine literature.

Kelly Gregory, PhD of the PVSLI awarded "Best Poster"



Kelly Gregory, PhD with her poster and award.

Congratulations to Kelly Gregory, PhD of the Pioneer Valley Life Sciences Institute (PVLSI) on her award for "Best Poster" in the basic science category at the Breast Cancer and the Environment Research Program's 14th Annual Meeting. The meeting was held in Atlanta, GA in November 2019. Her poster was entitled "The use of patient-derived breast tissue explants to study resident macrophage polarization and the effects of xenoestrogen exposure." The study utilized breast tissue from women who consented to be part of in the Rays of Hope Breast Research Patient Registry.

The Annual Meeting was supported by the National Institute of Environmental Health Sciences (NIEHS) and National Cancer Institute (NCI) and hosted by the University of Wisconsin-Madison.

UMMS Research Associate Eric Romo earns Addiction Health Services Research (AHSR) 2019 Travel Award



Eric Romo receiving his award.

Congratulations to Eric Romo, who recently received an AHSR 2019 Investigator Travel Award.

Mr. Romo is currently an MD/PhD Candidate in the Clinical and Population Health Research Program at the University of Massachusetts Medical School. His research focuses on hepatitis C risks among rural populations who inject drugs and how to reduce risk factors.

"Mr. Romo hopes to eventually practice primary care and addiction medicine, while maintaining a program of research focused on improving substance abuse treatment and harm reduction services for especially vulnerable populations," said a statement from the AHSR website.

Meet the Researcher



Dr. Daniel Skiest.

Name: Daniel J. Skiest, MD, FACP, FIDSA
Title/Academic Rank: Professor of Medicine
Department: Internal Medicine, Division of Infectious Diseases
Number of years at Baystate: Almost 15 years
What research training do you have? I have not had formal research training. I am mostly self-taught and learned as I went along.
What got you interested in research overall? I consider

myself a clinician who became interested in clinical research in my career. During my residency and fellowship, I observed several clinical scenarios, and to my surprise, there were not any good studies and there was a surprising paucity of information in certain areas. I liked the idea of being able to come up with a relevant clinical question and then trying to find some answers. I also enjoyed the process of analyzing the data and writing the manuscript and/or presenting the findings to my colleagues. I liked the fact that I could make contributions to the literature, which would not only help other clinicians but ultimately improve outcomes for patients.
What is your area of research? My primary areas of interest have involved Infectious Diseases, primarily HIV/AIDS. During my training in the late 1980s and the early 1990s, HIV was greatly feared. There were no effective treatments to treat the underlying cause. I realized that there was still a lot to be learned from this relatively new disease and that I was in a position to help patients. During my fellowship I worked on some clinical research projects on HIV, including a case-control study of HIV in the elderly. At the time there was very little literature on the topic. Now it is major issue in the field. My first faculty position was at the University of Texas Southwestern Medical Center in Dallas, Texas in 1994. The HIV clinic at Parkland Hospital (the county hospital for Dallas County), where I saw patients and taught, followed over 3,000 patients. By being observant and collaborating with others I was able to publish several series and developed investigator-initiated protocols. Subsequently we established an HIV clinical trials unit and participated in a number of important multicenter clinical trials which led to important advances in the field of HIV.

How do you see your research improving care for patients? The ultimate goal of research is to improve patient care. I appreciate the fact that I was able to make some small contributions to improving patient care.

What have been some of your favorite research projects to date that you have organized/participated in? I have been involved in a number of multicenter and single center studies. While I was at UT Southwestern I was an investigator for the AIDS Clinical Trials Group, which is a multicenter network funded by the NIH. I was able to lead a multicenter national study and participate in several other multicenter studies.

Do you have any awards? Yes, I was honored to receive the 2016 Weinberg Award for Academic Excellence at Baystate and I received the SmithKline Beecham Junior Faculty Award in Infectious Diseases at UT Southwestern.

What do you like most about your job? I like the variety of my job. I have the opportunity to do clinical work and help my patients, mentor fellows and residents, and participate in clinical research while interacting with numerous interesting colleagues.

What do you do to unwind outside of work? Biking, hiking, reading, traveling, and spending time with family.

Rays of Hope Walk & Run aids research efforts to help find a cure for breast cancer

For the past 25 years, Rays of Hope Walk & Run Toward the Cure of Breast Cancer has been making a difference in western Massachusetts. Proceeds from the event support research at the Rays of Hope Center for Breast Cancer Research, innovative equipment, breast health education programs, therapies for patients, and resources

for those who have breast cancer and those supporting loved ones with breast cancer.

Thank you to our talented research team that gives us all the hope of living in a world free of breast cancer.

To learn more about Rays of Hope, visit baystatehealth.org/raysofhope.



Breast cancer research team members at the 2019 Rays of Hope Walk & Run: Drs. Grace Makari-Judson, Joe Jerry, and Holly Mason.

Baystate Franklin Medical Center earns \$1M for mobile opioid addiction treatment clinic

In the fall of 2019, Baystate Franklin Medical Center acquired a \$1 million grant to launch a program to provide mobile services to people suffering from, or at risk of, opioid use disorder (OUD).

The grant was provided by the U.S. Department of Health and Human Services (HHS) through the Health Resources and Services Administration's Federal Office of Rural Health Policy. More than \$111 million was awarded to 96 rural organizations across 37 states as part of the Rural

Communities Opioid Response Program.

Many barriers exist to address OUD across the prevention, intervention, treatment, and recovery spectrum in Franklin County and the North Quabbin Region. People who need help are often unable to access and coordinate the services they need to get well. To address this critical and life-saving gap in services, Baystate Franklin Medical Center, in collaboration with the Opioid Task Force and other Consortium Partners, has used the funds to create the

Franklin County and North Quabbin Bridge Clinic (Bridge Clinic).

By offering a range of OUD services, the Bridge Clinic will increase prevention, treatment, and recovery in the rural Franklin County and North Quabbin region. The Bridge Clinic will identify, engage, assess, serve, and manage the population of people with OUD and at risk for OUD in our communities. Self-referrals or referrals from family or friends to the clinic are encouraged. For more information visit look4help.org.

Office of Research Holiday Town Hall held



The Office of Research hosted its Holiday Town Hall meeting on December 9th for a festive lunch with coworkers, complete with a roaring yule log.

New Faces of Research



Andres Santana
 Clinical Research Assistant II
 Clinical Trials Office

The **Innovator**



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We are interested in ensuring that Baystate employees and patients (and their families) are aware of the important research that goes on at Baystate and how it contributes to better patient care. *The Innovator* welcomes feedback and story ideas. Contact Allison Litera at allison.litera@baystatehealth.org to submit yours.