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2018

Baystate Medical Practice Annual Report - 2018

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Baystate Medical Practices

ANNUAL REPORT











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Andrew W. Artenstein, MD

Chief Physician Executive and Chief Academic Officer, Baystate Health President, Baystate Medical Practices Regional Executive Dean, University of Massachusetts Medical School-Baystate Professor of Medicine, University of Massachusetts Medical School-Baystate



The past year marked significant advancement toward our vision to be "the premier provider organization in the region and to be nationally recognized for delivering and evaluating high value health services and innovative medical education across a regionally integrated, strategically aligned system." BMP demonstrated key accomplishments in all aspirational domains:

"...to be the premier provider organization in the region..."

- We launched the BMP Quality Council, which represents the final link that connects ambulatory quality with our comprehensive, system-wide, hospital-based quality work. We can now measure, track, and intervene to continually improve our outcomes across the entire spectrum of the patient experience.
- Our Contact Center (i.e. Access and Referral Services) manages 10,000+ patient-based interactions daily and continues to demonstrate significant improvements in key metrics of quality assurance, customer service, and employee engagement and "turnover." Schedule utilization in most practices has exceeded our target goal of 85%.
- Our community health centers and community-based primary care practices have opened up numerous new appointment slots for patients who need to be seen immediately—the so-called 'urgent returns.' This favorably impacts all four of the BH compass points of safety, quality, experience, and value, and has reduced 'no-show' rates.
- For the third consecutive year, BMP met its budget targets; no easy task for a 1,000-member provider group that provides clinical services in more than 100 practices across 60 sites. This is especially impressive given that provider groups are volatile entities whose financial performance is impacted by numerous internal and external factors, many beyond the organization's control.
- Our overall team member engagement score for 2018 was 4.02, representing significant improvement (a 40% improvement in national ranking from 20th to 28th percentile) and demonstrating that our focus on this issue is having a positive impact.
- We have involved nearly 5% of our providers in the Provider Wellness Advisory Council, the group that will engage their constituents and oversee tests-of-change and other work unit-level interventions to mitigate and/or prevent provider burnout and help build resiliency among team members.
- We continue to grow our faculty development enterprise: 35 of the most consistently engaged Physician Leadership Academy graduates continued their leadership development journey by populating the six newly created BMP committees that participate in the operations of our organization and report directly to the BMP Board of Directors; we successfully launched the Research Faculty Development Program and graduated its first cohort and the inaugural Supporting Scholarship in Junior Faculty program that provides supplemental funding support for early career academic faculty members to disseminate research.
- We continue to recruit top talent for providers and clinical/academic leadership positions; our academic advancements and the medical school are cited draws for new recruits.
- We revamped our provider orientation and added an initiative that debriefs our new recruits after several months so that we can ensure we are meeting their needs and expectations. Additionally, we have initiated a formalized, mentoring process for our new providers and have expanded our peer-to-peer mentoring program ("Mentors Matter") for our talented, early/mid-career faculty.
- We are completing a 'deep dive' with a consulting group of national experts to find opportunities to better engage, understand, and work together with our Advanced Practice Provider (APP) team to optimize our current models of team-based care and ensure our APP colleagues remain vital and engaged contributors to our mission.

- We have consummated affiliations with several highly respected community-based primary care and specialty groups to expand our clinical delivery system and provide more access to care for our patients.
- We continue to train our team members in "Compassionate Connections," "Empathetics," and "Culture of Safety" principles and processes to optimize our patient and team member experience, critical to our future success.

"...recognized for delivering and evaluating high value health services..."

This arm of the vision represents translating the concepts of high value care into our clinical delivery system, rigorously studying it, and disseminating this knowledge both regionally and nationally to improve patient care.

- BMP team members made significant contributions to this year's successful financial and quality performance in the Next Generation Accountable Care Organization (Medicare) and the Blue Cross and HNE risk contracts. Additionally, we partnered with HNE and Caring Health to launch the BeHealthy partnership (Medicaid ACO), the vehicle through which we will transform care for our Medicaid population.
- We have achieved a 32% increase in extra-mural grant funding; this represents national recognition of our work.
- We launched two new research centers of excellence: the Institute for Health Care Delivery and Population Science, in collaboration with UMMS and UMass-Amherst Life Sciences and School of Public Health, and the Baystate Clinical Trials Office.
- We have already collected social determinants of health information on nearly 30% of our Medicaid ACO cohort; the data will allow us to identify the most fruitful target areas to improve the health of our population in partnership with community agencies.
- Our faculty and trainees published more than 150 articles this year in the peer reviewed literature; we are publishing more articles in higher impact journals than in any previous period, and several of these papers report on 'practice-changing interventions' that advance our national stature.
- Several of our faculty members serve on national advisory bodies (including the federal Centers for Medicare and Medicaid Services) and editorial boards that provide further evidence of national recognition of our work.

"...innovative medical education..."

- Our regional campus of the University of Massachusetts Medical School, UMMS-Baystate, has exceeded expectations; our educators created a first-year curriculum that connects pre-clinical knowledge with the social determinants of our patients' health, allowing our UMMS-Baystate students to develop a set of skills (including the all-important, empathy) that will serve them throughout their careers. The newly implemented second-year curriculum moves our students deeper into the clinical realm, as they develop their interview and exam skills in our local clinical practices and hospitals. Our candidate pool for future classes is among the most accomplished that UMMS has seen in its history.
- We have 1,200 students and trainees from more than 40 distinct programs who spend time within BH each year and have continued to evolve our innovative, interdisciplinary educational initiatives. Health care is delivered by teams, not individuals, and therefore our students and trainees learn their crafts in teams.

"...a regionally integrated, strategically aligned system of care..."

- Our Department and Service Line teams have envisioned and are executing a BH-aligned plan to coherently integrate their
 clinical service areas across the continuum of clinical needs, geographies, and levels of care that define our region. They
 are cognizant of our obligation to align community needs, organizational resources and capabilities, mission, and future
 sustainability as we create this system of care. We must also address our increasingly competitive environment and the
 threats we face from other health systems and care 'disruptors.' We have successfully integrated radiology, laboratory
 services, hospital medicine, emergency medicine, and have made significant strides in surgery, medicine subspecialties,
 and several other service areas.
- We have continued to advance our focused efforts in growing our tertiary care enterprise, most notably in Heart and Vascular, Neurosciences, Gastroenterology, and several surgical programs that will help sustain our future.

The BMP team—1,000 providers and nearly 1,500 other team members—is a strong one and possesses the commitment, passion, and collaborative culture to achieve our goals and advance our Vision while navigating through the challenges ahead. Because of the dedication, compassion, skill, and tireless efforts of our entire team, we have made significant progress towards achieving our Vision. Our leaders amplify this message in the pages that follow.

Betty LaRue, MN, RN

Chief Operating Officer, Baystate Medical Practices Vice President, Baystate Health Ambulatory Operations



2018 was another great year for BMP. We accomplished much in our journey to advance our Vision of being "nationally recognized for delivering high value health services and innovative medical education across a regionally integrated, strategically aligned system." Here are some highlights:

ACCESS TO CARE

Access is a continuing challenge for BH. We made significant gains in increasing our patient access to visits, surgeries, procedures, and tests, booking over 55,000 more scheduled appointments (3%) then in 2017. We created an Access Physician Advisory Council and instituted chair sanctioned scheduling guidelines for all service-lines. Our nurse triage team has expanded patient screening and is now involved in pilots that simplify and speed patient prescription refill requests. Metrics for 2018 demonstrated benchmark performance in quality and customer service in our Contact Center, low staff turnover rates (10.7%), and improved employee engagement scores (4.10). In seven of nine service lines we saw improvement in schedule utilization; in five of nine, improvement in new patient visits. In all service lines there was improvement in their percentage of "built-to-expected" schedules.

SAFETY/QUALITY

The BMP Quality Council was formed to focus on Ambulatory BMP initiatives, reporting to the BMP Board and aligned with the overall quality structure of BH. Quality dashboards have been initiated for all service lines with metrics focused on both compass goals and risk contract targets. After a rigorous selection process, five "learning collaboratives" were chosen in which clinical teams work on time-limited projects aimed to improve patient care in their areas. We believe that clinical changes can be best achieved by clinicians closest to the work when they are given the proper tools. Provider 5-Star ratings are now visible to consumers on the BH website; 42 of our providers were recognized this year for these top-level customer recommendations.

EMPLOYEE ENGAGEMENT

A major focus has been and will continue to be increasing employee/provider work satisfaction. Through a series of region-wide open forums, we identified key "pain points" for our staff and providers. We have made strides in salary adjustments, career ladder advancements, CEU offerings, and other challenges. We have hired our first Ambulatory Nursing Director, to help advance the professional practice of our nurses. Physician-led committees have been established to give greater voice to decision making and work life balance. Dollars have been committed toward improvements in our EHR and work teams are underway on this 18-month project. We have enlisted Sullivan Cotter in a review of our Advanced Practice Provider care models and pay practices.

VALUE

For the third straight year, BMP has met our operating budget of nearly \$350 million. We are on track toward achieving Meaningful Use payments of \$1.3 million for eligible providers. Service line profitability through the third quarter 2017 shows positive margin growth in Emergency Services, Digestive Health, Orthopedics, and Adult Medicine and improved operating performance in Children's, Behavioral Health, and Primary Care. Strong performance remains in Heart and Vascular and Neurosciences. We successfully partnered with HNE and Caring Health to launch the innovative Medicaid ACO in March.

REGIONAL GROWTH AND INTEGRATION

Service line expansion and clinical integration continued in 2018. 162 new providers joined BMP this past year; 45 of these represent new positions hired to support growing programs and services throughout the regions. Professional Services Agreements were initiated with Valley Medical Associates and Western Mass GI, in order to expand our primary and specialty service options to patients in the Pioneer Valley.

2018 was a year of great change and growth. I am appreciative of the wonderful medical and administrative leaders and their clinical teams who put quality and commitment in the forefront of care.

2018 BAYSTATE MEDICAL PRACTICES

Board of Directors

OFFICERS

Andrew Artenstein, MD Chair & BMP President

Dennis Chalke Treasurer

Kristin Delaney Clerk

OUR VISION

BMP will be the premier provider organization in the region and by 2020 will be nationally recognized for delivering and evaluating high value health services and innovative medical education across a regionally integrated, strategically aligned system.



Reginald Alouidor, MD



Andrew Artenstein, MD



Charlotte Boney, MD



Elizabeth Boyle, MD



Ronald Bryant



Kimberly Bucknor, MD



Dennis Chalke



Kristin Delaney



Kathleen Brooks Scoble, EdD, RN



Lisa Erickson, DNP



Edward Feldmann, MD



Cheryl Geoffrion, MD



Sarah Haessler, MD



Kevin Hinchey, MD



Nicolas Jabbour, MD



Mark Keroack, MD



Aaron Kugelmass, MD



Betty LaRue, MN, RN



Timothy Lepore, MD



Ray McCarthy



Wilson Mertens, MD



Dennis Oh, MD



Niels Rathlev, MD



Heather Sankey, MD



Barry Sarvet, MD

Ambulatory Quality

BMP QUALITY COUNCIL

- The BMP Quality Council was formed with the goal of promoting the delivery of high value health care services across a regionally-integrated and strategically-aligned system.
- The Council is responsible to set standards of quality and safety and to monitor performance, reporting directly to the BMP Board.
- The scope includes Clinical Quality, Patient Safety, Risk Management, Regulatory Readiness, and Infection Prevention.

OUALITY PERFORMANCE AND IMPROVEMENT

- We promote quality improvement activities for optimizing clinical patient care as well as performance on quality metrics relevant to risk contracts.
- We have seen improvements in performance on quality metrics in 2018.
 - We engage specialty practices in quality improvement activities.
 - We have identified relevant metrics of clinical quality for specialty practices that align with the BH compass goals and support the ACO and risk contracts.
- The following processes and workflows have been implemented with documented improvement in HEDIS metrics:
 - Implementation of point-of-care A1c machines at all primary care practices: annual A1c improved from 85% to 94%; A1c control improved from 63% to 70%.
 - New work flow for collecting data and improving rates of diabetic eye exams: pilot site improved from 52% to 58%; all practices aggregated improved from 48% to 52%.
 - Strategies to improve pediatric immunizations and well child visits: 3-6 year-old well visits improved from 69% to 77%; adolescent visits from 56% to 71%; Childhood immunizations improved from 66% to 83%.
 - Engaging gastroenterology to improve colorectal screening rates: rates improved from 60% to 70% over an 18-month period.

LEARNING COLLABORATIVES

- In 2018 the BMP Quality Council established five "Learning Collaboratives."
- Our goal is for local teams from individual clinic sites to learn quality improvement methods by carrying out meaningful improvement projects under the guidance of an improvement specialist.
- The teams will receive support from a facilitator to measure a process, make changes, and engage the rest of the clinic team in creating new standards and workflows.
- The following practices will be working on their projects over a six-month period.
 - Baystate General Surgery & Pre-Anesthesia Evaluation
 - Baystate Cardiology
 - Baystate Endocrinology and Diabetes
 - BMP-South Hadley Adult Medicine
 - Wesson Women's Clinic

SAFETY

- We promote utilization of the safety reporting system (SRS) to identify incidents and near misses.
- Safety risk areas identified this year from Root Cause Analyses included gaps in tracking lab and imaging results that resulted in delay in treatment.
- The teams identified gaps in processes and have implemented new workflows to mitigate future harm in consultation with the Healthcare Quality department.

EXPERIENCE

- Physicians and Advanced Practice Providers (APP) are recognized as 5-Star Performers in patient experience for achieving the 90th percentile in "Willingness to recommend."
- This year, 42 BMP physicians and APP were recognized for providing exceptional patient care.



Helmuth, MD

Medical Director,
Quality and Population Health,

Baystate Medical Practices

Paul J.



RN, MBA

Ambulatory Director,
Quality and Medical Management,
Baystate Health



Rebecca D. Blanchard, PhD

Senior Director of Educational Affairs, Baystate Health Assistant Dean for Education and Associate Professor of Medicine, UMMS-Baystate Director, BERST Academy



Kevin T. Hinchey, MD, FACP

Chief Education Officer, Baystate Health Senior Associate Dean of Education Associate Professor of Medicine, UMMS-Baystate

Office of Education





BERST Academy brought innovation and creativity to employee and student learning.

The Baystate Education Research and Scholarship of Teaching (BERST) Academy is an interprofessional community of educators across Baystate Health who – through consulting, program development, teaching, and professional development – celebrate the power of education to improve the care of our community. In 2018, BERST Academy designed and taught evidence-based practice in education and leadership grounded in three principles, including:

- 1) *Reflection*, as the process by which experience becomes learning
- 2) Motivation, as the construct which guides our learners' and employee's behavior, and
- 3) *Growth Mindset*, which encourages orientation not towards failure avoidance but rather, towards flourishing success.

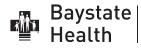
With over 75 members from over 20 different health professions, BERST Academy is a community for creative and innovative interdisciplinary professional development for educators and leaders. In addition to its foundational "Base Camp" for new BERST Academy members and monthly "BERST Bites" for innovative teaching practices, in 2018, BERST also offered its first BERST Rounds – half-day interprofessional experiences designed to teach critical content in new and different ways. Yoga Rounds – held at the Gateway City Arts in Holyoke - taught principles of mindfulness, expertise, and wisdom through yoga practice and Museum Rounds – held at the Springfield Art Museum - taught principles of clinical reasoning and problem-solving through visual art strategies.

Every year, over 2,200 learners pass through the halls of Baystate Health to learn how to care for the future patients of our community. BERST Academy continued its role as the backbone of ensuring that our employees actively acquire knowledge and skills to teach their future colleagues and, together, improve the care that is possible for our community.

UMMS-Baystate PURCH Track welcomed second, larger class.

As the regional campus of the University of Massachusetts Medical School, Baystate Health is home to the four-year curricular track called PURCH (Population-based Urban and Rural Community Health). In the fall of 2018, PURCH welcomed 27 new students from a diverse, competitive pool of applicants as the class of 2022. Their PURCH curriculum focuses not only on identifying and treating disease, but more importantly on promoting health for patients and their communities. Their innovative coursework integrates experiential learning for addressing concepts of bias and empathy. PURCH leadership and BERST leaders at BH collaborated to develop this innovative curriculum as well as to bring one of these curricular experiences, the poverty simulation, to Baystate Health executive leaders. The simulation taught leaders about the decision-making, stress, and realities of our low-income employees and community members and received commendation as one of the most important activities offered to our leadership group. To prepare PURCH faculty and preceptors in other professions including nurse practitioners and physician assistants, BERST faculty designed interdisciplinary professional development sessions to ensure the use of evidence-based best practices in teaching and precepting.

Office of Research





SAFETY

• The Baystate Research Facility received a perfect USDA Inspection Report.

OUALITY

• The Baystate Human Research Protection Program (HRPP) received 5-Year AAHRPP accreditation with distinction.

EXPERIENCE

- Used metrics to improve our customer service, for example, Sponsored Program Administration (SPA) improved its turnaround time for clinical trials by 64%, from 91 days in 2017 to 32 days in 2018.
- Launched a Clinical Trials Office to provide infrastructure to support investigators and staff engaged in sponsored clinical research.
- The Research Pilot Award Program (RPAP) has funded a total of 12 pilot research project from BH investigators, providing the means for clinicians to become clinician-investigators and focus research on improving patient care.

VALUE

- Awarded \$16 million in new external grant awards in FY18 and \$1.4 million for new clinical trials. New high profile grants included \$1.5 million for "Project MOTION: Maintaining Opiate Treatment to Improve Outcomes and Next Steps" from SAMHSA; \$2.8 million for "Identifying effective strategies used by Medicare Accountable Care Organizations to improve outcomes for patients with heart failure" from AHRQ; \$929,822 from NIDA for "SPOILER: towards Safer Prescribing of Legal Opioids from the Emergency Room;" and \$733,609 from AHRQ for "Shared Decision-Making for the promotion of patient-centered imaging in the Emergency Department: Suspected Kidney Stones".
- Executed a process improvement for financial management of clinical trial revenue, which included a Clinical Trials Audit to identify gaps and commence steps for process improvement with Corporate Compliance; establishing a standardized fee schedule to ensure all costs for research services are consistent across Baystate Health and a standardized fee for Principal Investigator and Clinical Coordinator effort on clinical trials; accepting responsibility for clinical trials invoicing for non-patient related services; and delivering two education sessions regarding Clinical Trials Billing Compliance in collaboration with HRPP.

ACADEMICS

- The Baystate Research Facility provided surgical training for ATLS, Emergency Medicine and OB/GYN to over 100 learners.
- Established collaborations with partners at UMass-Amherst, UMass-Worcester and Tufts CTSI to support clinical research among the campuses.
- The Institute for Healthcare Delivery and Population Science (IHDPS) has 28 Institute Fellows, with 14 of them joining us in FY18. IHDPS published 64 articles in the past four quarters, with 12 more publications than in the previous four quarters. IHDPS Fellows also received seven new external grants.
- The Institutional Scientific Review Committee (ISRC) reviewed and supported more than 300 investigator-initiated studies, industry-sponsored studies, and quality improvement projects.
- The Rays of Hope Breast Research Registry consented over 1,092 women and established primary cultures of breast epithelial cells from over 300 women.
- Initiated data collaboration and integration with UMMS-Worcester that will substantially expand our capacity and efficiencies in support of federally-funded and industry-sponsored clinical research and quality improvement initiatives.
- Dr. Lindenauer and IHDPS led the Baystate Health Care Alliance team that received a \$750,000 grant from the Massachusetts Health Policy Commission's SHIFT-Care Challenge to expand the Springfield Green and Healthy Homes Initiative, augment it with care coordination, and evaluate the program's impact on asthma outcomes in our region.



Peter Friedmann, MD, MPH, DFASAM, FACP

Chief Research Officer, Baystate Health Associate Dean for Research and Professor of Medicine, UMMS-Baystate



Amy S. Gottlieb, MD, FACP

Chief Faculty Development Officer, Baystate Health Associate Dean for Faculty Affairs and Professor of Medicine, UMMS-Baystate

Office of Faculty Affairs



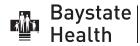


In addition to shepherding our regional campus through the implementation of University of Massachusetts Medical School's new Academic Personnel Policy, which included a new rubric for academic advancement, the Office of Faculty Affairs (OFA) devoted much energy to creating career development opportunities for Baystate Health providers and enhancing bi-directional communication to foster engagement in teaching, research, and leadership throughout the organization. To facilitate these activities, OFA welcomed a new team member with a background in professional development and led the following initiatives:

EXPERIENCE

- Onboarding Mentorship Program (OMP), a pilot program OFA designed for Baystate's Heart and Vascular Service Line to help new physicians become oriented and connected to the organization so they can succeed in their roles. Based on career interest and responses to a novel behavioral questionnaire, OFA is matching each individual with an experienced member of the institution who meets with the Mentee quarterly over the course of the initial year of hire, makes introductions to colleagues, serves as a resource for questions, and guides the Mentee toward opportunities for long-term support in his or her area of interest.
- Faculty Affairs Advisory Council (FAAC) and Enhanced Provider Orientation, new platforms to increase communication among departments, faculty, and OFA about career development resources, teaching and research opportunities, and programs that support professional advancement. The FAAC is comprised of senior leaders from each department at University of Massachusetts Medical School-Baystate and two junior faculty members, all of whom provide guidance to OFA and serve as important sources of information for faculty. Additionally, this past year OFA created video and written materials highlighting teaching and research opportunities at Baystate and incorporated these faculty engagement resources into monthly Provider Orientations.
- Research Faculty Development Program (RFDP), a collaborative initiative between OFA and the Office of Research to train faculty in research design and grant-writing to broaden Baystate's investigative and external funding capabilities. Seven junior faculty from multiple departments at Baystate and twenty senior faculty and mentors from UMMS-Baystate and UMMS Worcester participated in the four-month program, which included a mentored pilot grant proposal.
- Supporting Scholarship Among Junior Faculty Program (SSJF), a new funding opportunity to encourage the academic career development of junior faculty. This year, funds were awarded through a competitive process to seven faculty members to cover expenses related to presenting scholarly work nationally.
- Physician Leadership Academy (PLA), a longitudinal professional development program that cultivates emerging organizational leaders. The PLA boasts over 100 alumni. This past year, OFA engaged these exceptional graduates in enterprise-wide leadership opportunities, including serving on BMP committees that report directly to the Board of Directors and participating in Baystate Health's Coach Certification Program, an effort to develop career coaches to be deployed throughout the organization.
- Ongoing challenges include: Identifying resources to scale up the Onboarding Mentorship Program pilot (OMP) to serve retention in the organization; and identifying, standardizing, and operationalizing Baystate Health's new leadership competencies throughout the organization in partnership with Human Resources.

Office of Admissions





The Office of Admissions serves as the unofficial 'front door' of the University of Massachusetts Medical School-Baystate (UMMS-Baystate), the regional campus of UMMS, as it represents the first interaction of our future students with the medical school and with Baystate Health. We have had a tremendously successful initial two years since inception and achieved the following results in 2018:

- Successful recruitment of our second class of students to the UMMS-Baystate <u>P</u>opulation-based <u>U</u>rban and <u>R</u>ural <u>C</u>ommunity <u>H</u>ealth (PURCH) track.
- Matriculated 27 students into the Class of 2022 from the following undergraduate institutions: Arizona State University, Boston College, Boston University, Brigham Young University, College of the Holy Cross, Colorado College, Cornell University, Dartmouth College, Emmanuel College, Emory University, Hamilton College, Harvard University, Johns Hopkins University, Marquette University, Northeastern University, Princeton University, Providence College, The University of Scranton, University of California Los Angeles, University of Kansas, University of Massachusetts Amherst, University of Pennsylvania, University of Vermont, Washington University in St. Louis, Williams College.
- Diverse, accomplished students: 14 Massachusetts residents and 13 from out of state; two are first in their families to attend college; two are "under-represented in medicine;" five male and 22 female. This is an academically strong group with an average GPA of 3.7 and an average MCAT score (the medical school standardized admissions test) of 87.2%.
- We have garnered significantly more attention to the PURCH program nationally; there has been a 12% increase in applications from our inaugural year to our past application cycle.
- This year's application cycle (for the class of 2023) is off to an equally strong start with over 250 applications for our 25 positions.
- Beginning this year, PURCH Admissions leadership has joined UMMS leaders in recruitment trips to local and regional colleges as well as in participating in a national recruitment fair to increase awareness of our program.



Samuel H. Borden, MD, FAAP, FACP

Assistant Dean of Admissions Associate Program Director, Medicine-Pediatrics Residency Program, and Associate Professor of Pediatrics, UMMS-Baystate



COLLABORATION & TEAMWORK

Rooming-in Program Offers a Better Solution for Newborns, Mothers

L-R: Emily Lajeunesse, MSW, LICSW, Michelle Nicoli, RN, Katiria Moran, MSW, Rachana Singh, MD, MS, Nancy Rines, MSN, RN

As the challenge of opioid addiction has become more widespread, the number of babies born physiologically dependent on opioids has become more prevalent. Over the past two years a team at Baystate Medical Center has re-examined the way we care for these newborns and their mothers, and implemented a better way – the Rooming-in Program.

Previously babies impacted by maternal Opioid Use Disorder (OUD) were admitted to the NICU if they required pharmacological treatment for Neonatal Abstinence Syndrome. Parents understood little about the process, and length of stay averaged several weeks. With the Rooming-in Program, eligible babies remain with their mothers in a private room throughout treatment, encouraging breastfeeding and bonding. Mothers in turn receive both prenatal and postnatal education to better understand the process and how to care for their babies, leaving them empowered while significantly decreasing length of stay for these babies.

"We realized that the separation from parents was affecting these babies' care, and worked to create a more calming nurturing environment for them," says Rachana Singh, MD, MS, a neonatologist and medical director of NICU at Baystate Medical Center.

Singh's team helped secure a \$250,000 MA Health Policy Commission grant to improve impatient care for babies impacted by maternal OUD in 2017. Working with Nancy Rines, director, Patient Care Services, she identified four regular postpartum recovery rooms on Wesson 2 that could be converted into special rooms for these recovering babies and their families when needed. The space includes special swings for babies, dimmer lamps, and small refrigerators. When the rooms are not needed they are still used for other postpartum mothers and babies.

Education and training were also vital. Wesson 2 OB nursing staff used to providing routine newborn care received special training in the Neonatal Abstinence Treatment Protocol on how to properly administer and store medications as well as supporting infants and mothers, and how to care for families without passing judgment. NICU nursing staff like Michelle Nicoli, RN, have taken a special interest in connecting with this subset of families and in nursing education.

"She's put her heart and soul into educating the team and reducing the stigma for these moms," says Singh.

The program's dedicated social worker, Sarah Crawford, works with mothers well before the baby is born, assisting with everything from keeping paperwork in order to helping moms better understand the treatment process and how they can best care for their baby. She also connects them with community resources to assist with their continued sobriety.

Patients also receive help from others who have been in their place. Moms who have successfully gone through the process can serve as Peer Recovery coaches to provide support and encouragement.

Baystate's program is modeled after a successful rooming-in program launched at Baystate Franklin Medical Center in 2014 called EMPOWER (Engaging Mothers for Positive Outcomes with Early Referrals). Baystate's team met with Linda Jablonski, RNC, MSN, assistant nurse manager of The Birthplace, to help design their program.

With the Rooming-in Program, Baystate Medical Center is finding a way to address a national crisis affecting some of our littlest patients, and providing ways through and past a difficult experience.

"Parents love this option," says Singh. "They're able to stay with their child 24/7. They receive ongoing education during the process. There's a higher breastfeeding rate, the babies have lesser needs for treatment, and a higher discharge home to biological family rather than foster care."

COLLABORATION & TEAMWORK





L-R: Frank Lovelock, MHRD, Sarah Haessler, MD, MPH, Rebecca D. Blanchard, PhD, Kevin T. Hinchey, MD, Peter D. Friedmann, MD, MPH, Amy S. Gottlieb, MD

The best leaders are always learning, growing, and building upon the work of those who have gone before them. The UMass Medical School-Baystate partnership led to the creation, development, and expansion of professional development opportunities for faculty and providers. Programs offered through the Office of Faculty Affairs, the Office of Research, and the Office of Education are cultivating tomorrow's exceptional leaders.

"We are investing in our faculty and providers to support their success and our new and exciting academic platform," says Amy S. Gottlieb, MD, FACP, chief faculty development officer, Baystate Health, and associate dean for Faculty Affairs, University of Massachusetts Medical School-Baystate. "The cornerstone of any academic medical enterprise is its faculty and providers."

Encouraging Research and Scholarship

For junior faculty involved in research and innovation, the Supporting Scholarship among Junior Faculty Award (SSJF) covers costs of presenting scholarly activities including travel fees, conference registration, and clinical time relief. The SSJF offers access to mentors, potential collaborators, and peers nationwide. These experiences allow faculty to generate research ideas and partnerships that could impact the care we deliver.

The Research Faculty Development Program (RFDP), a collaboration between UMMS-Baystate's Office of Faculty Affairs and Office of Research, trains faculty in effective research design and grant writing. The program covers investigative methodology and the practical aspects of research, including budgeting and project management. The RDFP curriculum includes lectures, workshops, and, most significantly, a pilot grant proposal that involves one-on-one mentorship from a senior researcher at UMass Medical School.

Supporting Physician Leadership Development

The Physician Leadership Academy (PLA) was redesigned to help emerging leaders develop the skills necessary to transition into leadership roles. Offered every other year, this program includes lectures, workshops, and small group discussions on topics such as organizational stewardship, change management, and unconscious bias. "The Academy encourages self-reflection and discovery to help physicians understand and hone leadership styles and transition from the role of clinicians who work with one patient at a time," says Sarah Haessler, MD, co-director of the PLA.

Teaching

Offered through the Office of Education, the Baystate Education Research and Scholarship of Teaching (BERST) Academy applies experiential learning techniques to educate participants, empower people to feel more comfortable with teaching and leading, and foster a community of educators who learn from and support one another.

Focused on teaching, education research and scholarship, and leadership, BERST engages medical educators to train the next generation of health care providers. BERST Teacher track engages participants in applying principles of motivation, reflection, and innovation to identify creative teaching strategies, and includes content related to self-awareness, authentic leadership, motivation, and communications.

"BERST Academy is fueled by enthusiasm and connects our faculty to an interprofessional community, drawing on principles of education to support excellence, and fostering their self-awareness," says Rebecca Blanchard, PhD, senior director, Educational Affairs and Assistant Dean. "Our faculty's humility and commitment to their own professional development is impressive and translates to a broader culture of quality and safety that benefits residents, students, colleagues, and patients."



COLLABORATION & TEAMWORK

In the Midst of Devastation, Baystate Health Brings Hope

Back Row: Audrey Guhn, MD, Walter Valentin, Orlando Torres, MD, Andrew Balder, MD, Michael Knapik;
Middle Row: Karen Villanueva, Sandra Lamontagne, Maria Rivera, Ivonne Gutierrez, RN, Sonia Lopez; Front Row: Yaritza Baretto, patient

Hurricane Maria made landfall as a Category 4 hurricane on the island of Puerto Rico in September 2017, leaving widespread devastation and taking thousands of lives. The storm cut off power and other means of communication and left people anxiously awaiting news from family and friends. Even as the hurricane struck, Baystate Health was working to support those impacted.

Hundreds of people who had been displaced from their homes came to the area to stay with loved ones. Employees saw needs and met them, donating (along with Baystate Health Foundation) warm clothing, a wheelchair, and thousands of dollars for other unanticipated expenses.

"In my role at the city's homeless health center under the Springfield Department of Health and Human Services, I saw this urgent problem on the horizon," says Andrew Balder, MD, medical director, Baystate Mason Square Neighborhood Health Center. "My colleagues in the Baystate Health Centers created a rapid and valuable response to the health and health care needs of our fellow citizens displaced by a natural disaster."

"It became clear that this humanitarian disaster would have a major impact on the health care of those displaced and we needed to create access to care for these individuals until they could return home," says Abraham Thomas, MD, MPH, chair, Medicine, Baystate Health. Some evacuees arrived with medical needs and found support at Baystate Health's three community health centers in Springfield – Baystate High Street Health Center, Baystate Mason Square Neighborhood Health Center, and Baystate Brightwood Health Center – Centro de Salud.

Initially the health centers extended their hours to treat the influx of patients. High Street Health Center launched a special clinic for evacuees every Wednesday evening for six months. Spanish-speaking providers as well as two interpreters supported care delivered.

"People were treated for a variety of illnesses ranging from high blood pressure to diabetes to anxiety disorders to heart and other serious diseases," says Orlando Torres, MD, medical director, Baystate High Street Health Center. "Even filling a prescription had become impossible after the hurricane struck." Some people exhibited signs of depression. Others had back pain and other injuries from cleaning up debris or working to rebuild. Most had no medical records with them. One woman came with her children and a small bag of clothing. Baystate High Street Health Center later hired her as an interpreter and she serves on the team today.

Baystate Health established a relationship with two welcome centers set-up to assist Puerto Rican families and set-up a dedicated telephone line. Since October 2017, Baystate Health has cared for more than 450 evacuees, including providing wellness exams and immunizations necessary for children to attend local schools.

As Baystate Health team members worked to meet the medical needs of a displaced population, Government & Community Relations, including Michael Knapik, vice president, worked with state legislators to ensure support. In August, Senator James Welch (D-West Springfield) announced that \$500,000 from the state budget would go to the health system to defray some unanticipated costs.

"A sense of extraordinary empathy and need for action overwhelmed Baystate Health team members and community liaisons in the aftermath of the hurricane," says Torres. "We came together to utilize each individual talent, and led an effort with a sense of common purpose."

Baystate Health Recognized for Hurricane Maria Relief Response

PR Daily awarded Baystate Health its 2018 Corporate Social Responsibility Award, Honorable Mention for supporting the urgent care needs of displaced families from Puerto Rico. And the Puerto Rico Evacuee and Triage Clinic team received internal recognition, winning the top Baystate Health President's Excellence Award.

Department Highlights

Department of

ANESTHESIOLOGY

Michael Bailin, MD
Chair, Department of Anesthesiology
Associate Professor of Anesthesiology, UMMS-Baystate



SAFETY

- SAS anesthesiologists are reducing the use of opioids through perioperative regional and local anesthesia techniques.
- Department members deliver anesthesia services on a moment's notice for the stroke service and "Brain Attack Team."
- Cardiac anesthesiologists use sedation rather than general anesthesia for TAVR. Anesthesiologists are caring for patients undergoing structural heart interventions like Watchman and Mitraclip.
- We work closely with the Departments of Medicine and Surgery to minimize case cancellations and reduce unnecessary preoperative tests.
- We employ advanced software to audit waste and use of controlled substances ensuring regulatory compliance.
- We use the most advanced protocols to safeguard parturient patients receiving anticoagulants and regional nerve blocks.

QUALITY

- Our department uploads provider outcome data and performance measures into a Qualified Clinical Data Registry (QCDR) and benchmarks performance.
- The anesthesia performance improvement committee analyzes all adverse outcomes with systematic examination providing individual feedback.
- We have established a new paradigm for emergency airway response at BMC by developing the Difficult Airway Response Team (DART). Collaboration with DHQ and the Departments of Surgery and Emergency Medicine to provide a consistent expertise for airway management.

EXPERIENCE

- Baystate Pain Management Center now utilizes Botox (onabotulinum toxin A) for the treatment of skeletal muscle spasticity, cervical dystonia, and treatment of chronic migraines.
- Office based spinal cord stimulator trials allow easier access for our patients.
- In 2018 SAS launched a patient satisfaction survey.
- Our Acute Pain Service makes daily (seven days/week) rounds enhances patient satisfaction while optimizing pain control.
- We are leaders in employing preemptive analgesia with ketamine, gabapentin, and innovative nerve blocks to support patient comfort while combating the narcotic epidemic.

VALUE

- Streamlined multidisciplinary processes utilizing regional anesthesia for total joint replacement surgery has resulted in hospital discharge on POD 0 or 1 for carefully selected patients.
- We have begun integration of clinical services among the Daly, Chestnut, and HVC ORs to promote the first available operating rooms.
- By launching new initiatives we have strengthened charge capture on all pharmaceutical agents.
- We successfully launched Springfield 2500 for inpatient endoscopy, and the pediatric procedure unit.
- Planning is underway to drive new productivity and increased volume at BOSC for two new operating rooms.

ACADEMIC INNOVATION

- In 2018, two IRB studies were approved examining patient falls and postsurgical stroke after anesthesia.
- Our physicians are active on national anesthesia committees and in state leadership. One member is the current president of the Massachusetts Society of Anesthesiologists.
- Twenty-nine members of our department have been appointed or reappointed to the faculty of UMMS-Baystate Department of Anesthesiology.



Department of EMERGENCY MEDICINE

Niels Rathlev, MD Chair, Department of Emergency Medicine Professor of Emergency Medicine, UMMS-Baystate

SAFETY

- Enhanced Fast-Track (Split Flow model) has been expanded to eight hours per day five days per week. 30 additional patients per day are now being seen in this area.
- The High Frequency Utilizer program has expanded to include more than 100 complex patients.
- Efforts are in progress in conjunction with hospitalists and surgeons to improve management of consults, transfers, and admissions.

QUALITY

- A physician Director for Quality and Patient Safety was appointed. The major goals are to reduce catheter-associated urinary tract infections (CAUTIs) and the use of telemetry plus improving compliance with sepsis measures.
- Zero CAUTIs were attributed to the ED in the last three quarters.
- Door-to-balloon time for ST-elevation myocardial infarction remains favorable with respect to target performance.

EXPERIENCE

- The Adult ED exceeded the goal for patient experience for "Willingness to Recommend."
- A pathway was created to direct low-risk fractures in children directly from Baystate primary care practices to specialty orthopedic care.
- Emergency Medical Services (EMS) initiated collaboration with a commercial vendor to provide Mobile Integrated Healthcare. Providing appropriate care in the home may reduce potentially avoidable ED visits. This population health program is targeted at high-risk groups.
- The paramedic coordinator in the Capacity Management Center has coordinated the flow of patients requiring EMS transport. Many hours of bed turnover time have been saved.
- We successfully opened a new state-of-the-art department at Wing Hospital it is four times the size of the old ED.
- Provider engagement remains strong based on the 2018 survey.
- Burnout scores for physicians are significantly lower than the national average for emergency medicine.

VALUE

- BMC ED volume is up 4.7% year-over-year.
- Reserves and payments for medical malpractice cases have decreased significantly over the last 10 years.
- Part B charges per patient encounter have increased significantly year-to-date as coding has been outsourced.
- Relative Value Units per provider exceeded 75 percentile compared with national benchmarks.
- Net revenue exceeded BMP budget by over \$700,000 year-to-date.
- Physician productivity has increased in the Pediatric ED while using scribes.

ACADEMIC INNOVATION

- Physician investigators received five federally funded research grants year-to-date. This includes two five-year K awards from Agency for Healthcare Research and Quality and National Institute on Drug Abuse respectively, one two-year K award and one R21 award from the National Heart, Lung, and Blood Institute, and a T32 training grant from the National Institutes of Health.
- The simulation education program has expanded to include two dedicated fellows.
- The research coordinator and associates program received an award from the Office of Research.

MAJOR CHALLENGES

- ED volumes are likely to remain high despite systemic efforts to improve access to Urgent Care and the institution of Mobile Integrated Healthcare.
- As a result, functional and physical capacity will need to increase by opening Pod D 24/7 and expanding the footprint of Enhanced Fast-Track.
- Enhanced workforce stability will depend on aggressive recruitment and retention efforts.



Division of HOSPITAL MEDICINE

Michael Vemula, MD Vice President, Baystate Health Adult Hospital Medicine

SAFETY

• Hospital Medicine holds "morbidity and mortality" conferences to discuss cases and opportunities to improve patient safety and quality care.

OUALITY

- Developed three Clinical Care pathways: A fib with RVR, alcohol withdrawal, and sepsis in CIS to be implemented on intercare units at all four sites.
- All community hospitalists did week-long rotations on the Intermediate Care Unit at BMC to refresh their skills at caring for higher levels of clinical illness.

EXPERIENCE

- In addition to "Compassionate Connections" training, all Hospitalists have undergone "Empathetics" training to enhance communication and caring for their patients.
- Press Ganey Employee Engagement overall engagement score of 4.22 ranked us in the 68th percentile compared to the national benchmark.

VALUE

- Hospitalist volume increased by 8% compared to FY17; 196k vs. 182k; representing a continued upward trajectory (there was a 10% increase from FY16 to FY17).
- Hospitalist productivity increased significantly with the average subsidy per hospitalist at significantly less than the national average, in the face of progressively increasing level of severity of illness of our patient population.
- Case mix index (CMI, a measure of severity of illness) increased by 1.7%, contributing approximately \$2 million in revenue to BMC.

ACADEMICS

- The second class of the Hospital Medicine AP Residency was a success, hiring seven out of seven graduates. Five of these AP graduates replaced five MD's slots resulting in significant cost savings.
- The Advanced Hospital Medicine Fellowship graduated four hospitalists from the first class. The second class has five hospitalists participating in the QI Track and beginning work on the hospital-wide telemetry project. A third class of five hospitalists will start in September 2018.



Department of MEDICINE

Abraham Thomas, MD, MPH Chair, Department of Medicine Professor of Medicine, UMMS-Baystate

SAFETY

During the last year, the Department had a major redesign of the hospital rounding process on medical acute care units by establishing, at the start of the day, an interdisciplinary huddle involving providers, nurses, case managers, and social workers to discuss the care of the patient and address safety issues that may have arisen during their care. This coordination allows the entire team to know the plan of care and convey this to the patient and their family. The Department has played a major role in the leadership of the CA-UTI committee and the telemetry reduction committee.

QUALITY

The Infectious Diseases Division started a program to manage Medicaid and Medicare Accountable Care Organization (ACO) patients to reduce hospitalizations. The palliative care team has been collaborating to improve outcomes for ACO patients with congestive heart failure by providing palliative care concurrently with heart failure treatment. As part of the Medicaid ACO, a care management clinical team was developed that has integrated community health workers to help patients in the ACO. The Gastroenterology Division expanded the nurse-directed screening colonoscopy program in which patients save time and money by not having to visit a provider prior to having their colonoscopy. This helps improve access for other patients to see a Gastroenterology provider in clinic. This program has a "no-show" rate of only about 5%.

EXPERIENCE

Our three community health centers (CHCs) provided a local medical response for the public health emergency for Puerto Rican evacuees from Hurricane Maria. From 11/2017-4/2018 more than 400 patients were seen at all three centers. This was recognized by the state of Massachusetts with a \$500,000 award to help defray the costs of this program. Several physicians in the Department scored in the top 10% of physicians nationally for patient satisfaction. A telemedicine program to improve diabetes education is being developed by the Endocrinology Division and the High Street Health Center to allow patients to receive diabetes education at the time of their primary care provider visit.

VALUE

The three CHCs revamped their schedules to create over 600 same day slots/month for urgent care visits for their patients. Thus, patients have more availability to seek care at the CHCs instead of the emergency department. The Medicaid ACO was launched to develop and deliver a new model of care for Medicaid patients in the state of Massachusetts. The ACE unit program and Geriatrics-palliative team helped prioritize care and decrease acute care utilization/costs of care for the Next Generation (Medicare) ACO patients.

ACADEMIC INNOVATION

A new Pulmonary/Critical Care Fellowship program started this year. Members of the Department of Medicine continue to have funding from a variety of agencies including the NIH, HRSA, and the Massachusetts Department of Public Health. The Department's investment in developing research faculty has resulted in one of the faculty securing independent funding from the NIH (R01 grant) this year. Members of the Department were successful in scholarly activity, highlighted by numerous abstracts and publications. A peer-mentored case report curriculum for the Medicine-Pediatric residents has increased the regional and national presentation rate by 300%.

KEY CHALLENGES

There are several key challenges in FY 2019. As the Department continues to grow by adding more outstanding physicians and advanced practice providers, there is need for more office and clinical space. Additional funds are needed to grow all the components of an academic Department of Medicine, especially research. We will continue to develop and deliver a new paradigm of cost-effective, high-value, patient-centered care for those patients who are part of the new Medicaid ACO and other risk contracts.



Department of OBSTETRICS & GYNECOLOGY

Heather Sankey, MD Chair, Department of Obstetrics & Gynecology Professor of Obstetrics and Gynecology, UMMS-Baystate

The BH Department of Obstetrics and Gynecology provides services over the entire region, at all four Baystate hospitals and at more than a dozen outpatient sites. We are the tertiary care referral center for high risk obstetrics, complex gyn surgery, gynecologic cancers, and infertility in western Massachusetts. This year we have faced challenges in subspecialty physician recruitment and increasing medical complexity of our patients, most notably in obstetrics.

SAFETY

- Our department had a strong showing at the President's Excellence Awards with a Safety Award, an Honorable Mention in Quality and shared the top award with Pediatrics for Patient Experience with "Impact of Rooming-In for Maternal-Infant Dyads impacted by Opioid Use Disorder."
- We are making a continued effort to ensure safety and quality by designing a provider coverage model that optimizes care for patients during a time of increasing co-morbidities and complexity of care across both obstetrics and gynecology.

QUALITY

- Baystate Midwifery & Women's Health midwifery practice was recognized with two awards from the ACNM Benchmarking Project ("Best Practice" low preterm birth rate & "Triple Aim Practice").
- Reproductive Endocrinology and Infertility continues to have high rates of success, well above the national average and has seen an increase in In Vitro Fertilization patients since the Dartmouth program closed.
- Our department participates in the Massachusetts Perinatal Quality Collaborative (MPQC) as well as the Perinatal-Neonatal Quality Improvement Network of Massachusetts (PNQIN), focusing on reducing adverse maternal and perinatal obstetric outcomes, respectively.
- Obstetrics across Baystate Health saw the development and implementation of a new maternity electronic medical record (EMR). The department invested in robust pre-launch training, leading to one of the smoothest transitions seen in adopting a new EMR.
- Integration of Behavioral Health services, dieticians, and social services into our outpatient practices in the Eastern and Metro regions improves quality of care for patients and supports providers in their clinical work.

EXPERIENCE

- The Birthplace at Baystate Franklin Medical Center finished construction on the Susan Liddell CNM Memorial Birth Room which is equipped with a new birthing tub to increase access to water birth.
- The Eastern Region offices have been brought together under one medical director with one scheduling unit. By doing so, patients have more options for access to care as it is easier for patients to schedule appointments in any of the Eastern Region offices (Ludlow, Palmer, Ware).
- Pioneer Women's and the Birthplace at Baystate Franklin Medical Center organized an EMDR (Eye Movement Desensitization and Reprocessing) teaching conference related to birth trauma as a way of teaching midwives and physicians techniques to intervene with patients with significant trauma related to birth experience.
- We have partnered with Caring Health and the BH Community Health Centers to increase access to long-acting reversible contraception.
- We offer urogynecologic services one day a week in both Baystate Franklin and Baystate Noble, including surgical procedures, and most of our subspecialists offer visits on-site in Northampton.
- BH Gyn Oncology is in the top 10% nationally for recruitment into treatment trials.

VALUE

- We provide remote reading and interpretation of ultrasounds for Berkshire Medical Center, Mercy Medical Center, Pioneer Women's Health in Greenfield, Northampton Ob/Gyn, and Baystate Mary Lane Ob/Gyn.
- Pioneer Women's Health and Wesson Women's Clinic have partnered with Pediatrics on the Empower program which has positively impacted many opioid-addicted women and newborns. A \$1,000,000 grant disbursed over two years was awarded to Pioneer Women's Health and the Birthplace at Baystate Franklin Medical Center as part of the 2018 State Opioid Response Grants "Moms Do Care Expansion Model" which will assist with expanding and augmenting their EMPOWER Program for mothers on medication assisted therapy in Franklin County.
- We are aligning the new reporting functions in the EMR with our OB Bundle work (with HNE) and our quality initiatives.





Department of

PATHOLOGY AND BAYSTATE REFERENCE LABS

Vandita Johari, MD
Interim Chair of Pathology, Associate Professor of Pathology, UMMS-Baystate
David Gang, MD
Interim Chair of Pathology, Professor of Pathology, UMMS-Baystate

The BH Department of Pathology and Baystate Reference Laboratories (BRL) have 22 pathologists and approximately 600 technical support staff. Our 10 CLIA licensed laboratories provide high quality state-of-the-art, accessible pathology and laboratory testing services system-wide and across New England.

SAFETY

- Inpatient phlebotomy services introduced an innovative iOS-based Clinical Collect Application upgrade to ensure accurate positive patient identification significantly reducing labeling errors.
- The Quality Improvement Program adapted the Department of Healthcare Quality "Filter tool" for BH Safety reporting System (SRS). This helps track and trend laboratory occurrences in SRS and identifies areas for focused process improvement.
- The Laboratory Utilization Management Committee (LUM) is rolling out an "Essential test menu policy" to provide laboratory testing when systems are not fully operational to ensure that key tests are always available in any circumstance (e.g. prolonged IT downtimes or natural disaster).

OUALITY

- The IT service established a bidirectional interface between the CIS Ambulatory (ACPOE) application and Atlas (LabWorks), ensuring that all lab orders placed in CIS by BMP providers are transmitted seamlessly to BRL phlebotomists and lab staff improving efficiency and reducing the number of "missed tests."
- The LUM aligned with Operations Excellence CAUTI Working Group to optimize criteria for performing urine cultures on catheterized and non-catheterized patients to reduce CAUTI rates across the system.
- BRL Worcester Satellite Lab expanded local services for Eastern MA providers decreasing turnaround times and positively impacting patient flow and safety.

EXPERIENCE

- Due to faculty efforts and BH leadership support, we saw a significant rise in provider Press Ganey Employee Engagement scores and a shifting up to tier 2.
- BRL successfully implemented a program for tracking patient satisfaction in 56 Patient Service Centers.
- We expanded biomarker testing (including PDL1) to determine eligibility for novel cancer drugs adding to the spectrum of services for cancer patients.
- The Cytology service expanded the Rapid On-Site Evaluation (ROSE) service to include EBUS (endobronchial ultrasound) guided fine needle aspiration procedures resulting in fewer passes and reduced risk of intraprocedural complications.

VALUE

- BRL was ranked among the top 25 hospital-based outreach labs nationally as measured by Medicare CLFS payments for 2016. BRL
 performs 6-7 million tests annually, has 56 draw stations and 80 EMR interfaces. We evaluate close to 50,000 surgical and 75,000
 cytology specimens.
- The LUM Committee increased its gatekeeping efforts for expensive tests resulting in approximately \$100,000 dollars in cost avoidance. The utilization focus for next year is reducing "routine" laboratories, late night /early morning blood draws and using CIS to optimize blood product usage.
- The Point of Care (POC) testing team expanded its support to over 50 inpatient and outpatient sites. This team provides comprehensive services to help care teams meet stringent JCAHO and CAP regulatory requirements.

ACADEMIC INNOVATION

- Our faculty and residents had 10 peer-reviewed publications, three books chapters, five invited presentations and 10 poster presentations.
- Several faculty members serve on regional, national, and international committees. Our faculty members are currently presidents of both New England and Massachusetts Societies for Pathologists.
- A faculty member and resident partnered to develop innovative web-based self-assessment modules used nationally for CME and MOC.
- Two interdepartmental teaching conferences were introduced: Molecular Tumor board for Hematology Oncology fellows; Cutaneous Tumor board for dermatologists/oncologists.
- Our faculty continued collaborative research with PVLSI and UMASS, Amherst currently studying DNA methylation and gene expression patterns in breast tumors.
- We provide internships for STCC and UMASS Dartmouth Medical Technologist training programs providing a pipeline for recruitment of technologists.



Department of **PEDIATRICS**

Charlotte Boney, MDChair, Department of Pediatrics
Professor of Pediatrics, UMMS-Baystate



Baystate Children's Hospital is the only accredited children's hospital delivering tertiary care to infants, children, and adolescents in Western Massachusetts. The Department of Pediatrics at UMMS-Baystate, comprising 70 physicians in 15 subspecialties, provides the majority of inpatient and subspecialty care to children in Western Mass and primary care to the underserved in greater Springfield. Our vision is to be the premier children's hospital in New England by combining safety, quality, and compassionate patient care with outstanding medical education and innovative clinical and quality improvement research. Recruitment was very successful this year with the exception of child neurology. Inpatient admissions increased 10%; ambulatory specialty volume increased modestly. Boston Children's Hospital is providing inpatient and overnight neurology coverage as well as telemedicine services in the NICU for retinopathy of prematurity screening. The new expanded, state-of-the-art procedures unit and relocation of pediatric hematology-oncology to a more patient-friendly facility has improved access, quality and family experience. Two years in a row, BusniessWest.com has chosen a primary care pediatrician from our general pediatrics division as a local "HealthCare Hero."

SAFETY

Baystate Children Hospital (BCH) joined Solutions for Patient Safety in 2015, a network of >130 children's hospitals in North America sharing data and best practices to reduce serious harm to children in our hospitals. We are actively engaged in nine bundles of hospital-acquired conditions and all inpatient units have physician safety champions and team safety huddles.

QUALITY

Breadth and depth of pediatric specialty care increased through new faculty who joined the department in the divisions of Hospital Medicine, Pulmonary, Developmental Pediatrics, Critical Care, and Hematology-Oncology. We now have pediatric nephrology at the Specialty Center thanks to our alliance with Connecticut Children's Medical Center. Boston Children's Hospital Department of Neurology is providing neurology inpatient consultation overnight and on the weekends, and the Department of Ophthalmology is providing telemedicine services for Retinopathy of Prematurity screening. The new pediatric procedure unit has increased both access to and scope of procedures with utilization up 4%. The pediatric Hematology-Oncology clinical program moved into its new space and now has full-time Child Life services embedded in its staff. A multidisciplinary initiative has begun to address the burgeoning numbers of children with acute behavioral and psychiatric issues in order to care for patients boarding in the ED.

EXPERIENCE

PressGaney surveys through mid-August 2018 reveal that Divisions in Endocrinology, Cardiology, Genetics, Infectious Diseases, Pulmonary, and Developmental-Behavioral Pediatrics have met or exceeded the BMP threshold >91% of respondents recommending the provider office.

VALUE

The rooming-in pilot program for mother-infant dyads being monitored/treated for Neonatal Abstinence Syndrome was made possible through a Health Care Innovation Investment award from the Massachusetts Health Policy Commission for a period of 18 months, ending in August 2018. Neonatal clinical outcomes improved significantly, including reduced rates of pharmacotherapy, reduced LOS, increased breastfeeding rates, and more babies discharged home to biological families. The Pediatric Antibiotic Stewardship Program reviewed 397 antibiotic prescriptions in the past 12 months. Using the metric "days of therapy/1,000 patient days per month," *before* program implementation in 2/2015 was 247.3; *after* hospital-wide program implementation (2/1/15 – 7/31/18) was 198.9 and since 9/1/17 was 176.9. Hospital and Critical Care Medicine collaborated to improve asthma care, resulting in a net reduction of \$194 per hospitalization compared to the prior year.

ACADEMIC INNOVATION

Academic productivity improved this year with 40 publications (including online and book chapters), an increase of 30%. Research funding included seven new grants (pharma, clinical trials, education), four of which were awarded to Newborn Medicine. The pediatric categorical residency received 996 applications and interviewed 155 candidates to successfully match nine medical students who began training in July 2018. The pediatric board pass rate has continued to improve from 92% in 2016 to 94% in 2017.



Department of **PSYCHIATRY**

Barry Sarvet, MDChair, Department of Psychiatry
Professor of Psychiatry, UMMS-Baystate

The Department of Psychiatry is committed to the goal of advancing integrated and patient-centered models of behavioral health service delivery in order to improve the overall health and well-being of patients throughout the health system. The department provides psychiatric treatment across a continuum of care including five inpatient units, four partial hospital programs, a dedicated psychiatric consultation service, specialized outpatient programs, and a system of embedded behavioral health resources in BMP primary care practices. The UMMS-Baystate general psychiatry residency program is in its 10th year of operation and serves as a major pipeline to improve the psychiatry workforce in the region.

SAFETY

- The department has developed a ligature risk mitigation strategy to reduce risk of suicide for psychiatric inpatients across the service line.
- Standardized suicide risk assessment processes have been implemented for hospital-based programs.
- Inpatient psychiatric services continue to have consistently lower rates of restraint and seclusion in comparison to state and national benchmarks.
- The Behavioral Resource Team has collaborated with partners across the health system on hospital-wide initiatives to reduce workplace violence.

QUALITY

- We have developed a psychiatric consultation program for our health centers in support of the behavioral health integration strategy for the ACO.
- The department is completing plans for an Addiction Consultation Team to address the needs of patients with substance use disorders in the context of hospital based services. This service will be the first phase of a system-wide initiative to improve care for patients with opioid use disorder and other relevant conditions.
- We have implemented a trans-cranial magnetic stimulation (rTMS) program for treatment-resistant depression with locations at BMC and the BWH Griswold Center.
- The department has implemented a psychiatric consultation service for the BMC Emergency Department.

EXPERIENCE

- We have made substantial improvements in access to our outpatient psychiatric services. Third next available appointments are now tracking at 10 days and our percentage of new patient visits have increased to 17%, well above internal and external benchmarks.
- Our IBH and MCPAP teams continue to offer innovative strategies for improving access to behavioral health care in the primary care setting.
- Our trauma-focused mental health team at the Baystate FAC continues to expand service with a \$2.5M increase in grant support. New grant funded programs provide increased capacity to treat post-traumatic mental health issues of children and families, including those who have experienced the traumatic loss of loved ones to suicide and homicide.

VALUE

- The performance of the department exceeded budget at the close of FY18.
- Patient progress and census management initiatives on BMC psychiatric inpatient unit this year have resulted in improvement in census to 98% capacity.
- Baystate Wing CHART Team provided outreach and care coordination for high risk behavioral health patients, reducing readmissions in the target population by 71% in eastern region.

ACADEMIC INNOVATION

- Seven peer-reviewed publications and 32 presentations at national meetings have been generated from the department of psychiatry over the past year.
- Planning for a new child psychiatry fellowship program is underway.
- Members of the psychiatry department serve in leadership roles within national psychiatric organizations including APA, AACAP, ACLP, and AAPL.

CHALLENGES

- Shortage of inpatient psychiatry beds in the region continues to result in psychiatric patients "boarded" in the ED and inpatient units.
- New regulatory requirements from TJC and CMS necessitate significant capital investments for renovations on psychiatric inpatient units.



Department of RADIOLOGY

Richard Hicks, MDChair, Department of Radiology
Associate Professor of Radiology, UMMS-Baystate

The Baystate Health Department of Radiology is staffed by 46 radiologists and over 250 technologists and support personnel supplying imaging services across four hospitals, seven large outpatient sites and 6 smaller outpatient sites. We are proud to supply high-quality comprehensive diagnostic imaging to approximately 950 patients/day at BMC and 1,550 patients/day system-wide. We have had several key accomplishments this past year:

SAFETY

- Contrast reaction management posters mounted in all pertinent patient sites system-wide.
- MRI protocols altered system-wide to limit potential gadolinium retention in pediatric patients.

OUALITY

- Clinical Decision Support Software (CDSS) roll-out continues in advance of new 2020 CMS deadline.
- Digital Breast Tomosynthesis (3D mammography) becomes more widespread with addition of units in BRI offices.
- Registries for dose-management, breast cancer, and lung cancer screening expanded to Baystate Franklin and Baystate Wing.
- Longmeadow Urgent Care images and reports available in CIS.

EXPERIENCE

- 3,300 CT and BMC diagnostic radiology sections exceed targets for "willingness to recommend."
- More than 5,000 patients have viewed their radiology reports and/or images in the radiology portal. Almost 200 patients have utilized the patient portal for viewing screening mammography results (now available the next day).

VALUE

- BMC Outpatient imaging services has an annualized revenue of \$32.1M (+14.5%) and a net margin of \$14.2M. Net income from all operations increased by 15.2%.
- Service line optimization proceeds at Baystate Franklin, Baystate Noble, and Baystate Wing. \$200,000 savings predicted at Noble for FY'19.
- Overall BMC volumes are favorable with increasing outpatient/ED volume and flat or declining inpatient volume. FY'18 outpatient volume +3.3%, ED volume +6%, and BBWC volume +3.5%. Inpatient volume relatively flat at +0.7% and overall BMC volume +4.1%. Looking specifically at high end imaging reveals outpatient/ED CT volume +12% and MRI volume +5.8% while inpatient CT is flat and inpatient MRI is -3.3%.

ACADEMIC INNOVATION

- Health Care Economics program has become part of the residency curriculum.
- Radiologists participate in BERST Teacher and Leader tracks.
- Grant received from the Association of University Radiologists for faculty development.
- Seventeen peer-reviewed articles and 25 national presentations/abstracts were produced by staff.

CHALLENGES

- Provider Wellness challenges among radiologists.
- Continued administrative, technical and professional integration across BH.
- Continued volume increases in outpatient and ED high-end imaging stress the system and may need to be analyzed for appropriateness.
- Interventional radiology consolidation and IR service levels in community hospitals.



Department of SURGERY

Nicolas Jabbour, MDChair, Department of Surgery
Professor of Surgery, UMMS-Baystate

Baystate's Department of Surgery is a team of 50 surgeons, 42 Advance Practitioners, and 90 employees which has made significant progress in the past fiscal year towards advancing Baystate Health's strategic goals of top tier performance in safety, quality, patient experience, and value using academic innovation to power our efforts.

SAFETY

- Facilitated the regionalization of care for patients that require urgent/emergent surgery with the Emergency General Surgery Service at BMC as the central hub.
- The breast surgical section of Surgical Oncology introduced the axillary reverse lymphatic mapping procedure to reduce the risk of lymphedema after an axillary node dissection.
- Our Division of Trauma held a very successful gun buyback program with the District Attorney's office and the Springfield Police Department.

OUALITY

- Launched a new quality improvement project for Rapid Response Team activations in bariatric surgical patients.
- The Surgical Oncology division started a melanoma interdisciplinary skin cancer tumor board along with New England Dermatology, Baystate Pathology, and the D'Amour Regional Cancer Program.
- Surgical Oncology division achieved an "exemplary" rating from NSQIP in minimizing pancreatic fistula complications following pancreatic surgery.
- The radioactive seed localization program for breast lesions passed the 1,500 patient mark this year.
- Pediatric NSQIP for improving safety, efficiency, and cost and effectiveness has started this year.
- Pediatric Trauma section along with the Department of Pediatrics and Pediatric ED has created a formal non-accidental trauma pathway.
- The Colorectal Surgical Site Infection (SSI) prevention bundle has paid off with the lowest SSI in the past three years.
- Enhanced collaborations with clinical engineering, radiology, and surgery for 3D printing for preoperative education and planning.

EXPERIENCE

- In collaboration with Tech Spring, developed a free app for bariatric patients called "Baritastic" that allows the team to follow patient's progress pre- and post-operatively to improve the patient experience.
- Multiple providers received a 5-Star Press Ganey award for "Willingness to Recommend."
- Multiple divisions achieved and sustained Press Ganey scores of >92% top box scores for "Would Recommend."
- Surgical scheduling was redesigned to minimize the time between consultation and date of surgery.
- We implemented a successful Telehealth program for post-discharge in colorectal patients.

VALUE

- Performing patent ductus arteriosus ligations in the Neonatal Intensive Care Unit (NICU), a multidisciplinary team.
- Increased the number of patients evaluated and treated with ORIF of rib fractures by 20%.
- Postoperative pathways have been created to minimize access time for new patients while providing high quality, lower cost postoperative care to our patients.
- OR steering committee has implemented a new BMP family block scheduling methodology though a "tier" release structure, resulting in OR utilizations increasing from less than 80% to over 90% at BMC for this group.

ACADEMIC INNOVATION

- Three consecutive years of 100% Board Qualifying Examination pass rate.
- Greater than 80% of our graduates go on to subspecialty fellowship training including the most competitive plastics surgery and pediatric surgery.
- Our surgical residency clerkship for third year medical students is consistently rated among the top 10% of all clerkships.
- Baystate simulation center is among the first 19 such centers to be accredited by the ACS. It is used by all departments at BH except pathology, and it clocked over 4,000 user-hours per year.
- 24 publications in the department.
- Community outreach via the ACS "Stop the Bleed" campaign, educating > 10,000 EMS, police, fire, and teachers this year.
- We continue to convene a successful Annual Pediatric Trauma Conference for prehospital and hospital providers.
- The Plastic surgery division started an internal education program for the staff, a "lunch 'n learn" series, to enhance dialogue and knowledge base for office staff.
- The department initiated the Surgery newsletter ("What's New In Surgery") this year.

Service Line Highlights

BAYSTATE HEART AND VASCULAR PROGRAM

Aaron Kugelmass, MD

Chief of Cardiology and Vice President/Medical Director, Baystate Heart & Vascular Program Professor of Medicine, UMMS-Baystate



The Baystate Heart and Vascular Program has continued to achieve national benchmarks and recognition for the outcomes and quality metrics of many of its programs. Newer clinical programs, such as ventricular assist devices (VADs) continued to expand with excellent outcomes. At the same time, we introduced additional care programs, with percutaneous mitral valve repair and left atrial appendage closure commencing in western Massachusetts this past year. Academics enjoyed continued success with an expanding cardiology fellowship. Investigation excelled with a greater number of peer reviewed publications year over year. This past year, Heart and Vascular investigator(s) have been recognized with internal grant funding, the Baystate Early Career Investigator Award, and a NIH study section appointment. A new chief of cardiac surgery has joined us, and we have added physicians and advanced practitioners to vascular surgery and cardiology. A new faculty mentorship program has been initiated for these new service line physicians. In the upcoming year we look to expand and further develop our clinical programs; new and established. Both education and clinical investigation are poised for further growth.

SAFETY

We have advanced the "Culture of Safety" team-based work in the Heart and Vascular Operating Rooms and perioperative unit. We have also redesigned and implemented Heart and Vascular Morbidity and Mortality conferences.

OUALITY

The Heart and Vascular Service Line continues to accrue national recognition for quality and outcomes, garnering the following awards over the past year alone:

- Truven Top 50 Cardiovascular Hospital (eighth time).
- Modern Health Care Top CV Hospital.
- US News and World Report "High Performing" in 4/4 Heart and Vascular Categories: Abdominal Aortic Aneurysm, Aortic Valve Surgery, CABG, Congestive Heart Failure.
- US News and World Report 4th highest Heart and Vascular Center in New England.
- Cardiac Surgery STS 3 Star-mitral valve surgery.
- National Top Decile-Mortality for TAVR, PCI-overall, PCI-STEMI.
- National Top Decile-Stroke-TAVR.
- Mission Lifeline Bronze Plus Award-STEMI Receiving Hospital.
- Ventricular Assist Device- no mortality in first two years.

We initiated several new clinical programs this year, including a percutaneous mitral valve, left atrial appendage program, and a Pulmonary Embolism Response Team (PERT).

EXPERIENCE

Our Press Ganey Ambulatory score for the "Likely to Recommend" metric was 91.5%, the highest in BMP. Seven H&V physicians were in the Press Ganey Top Decile ranks. "SeamlessMD," a patient education tool, was initiated in cardiac surgery.

VALUE

Our highly successful CABG Bundle program achieved shared savings in excess of \$1.5M. "Next Gen" ACO internal CHF bundle was implemented. We also exceeded CMS 80th percentile metrics for our clinical documentation improvement work, bringing in significant additional revenue to the system. We have conducted refreshed strategic planning for the Heart and Vascular Service Line with a focus on growth and optimization of services across our system of care. As part of this, we initiated the work on Cath- and EP Lab expansion.

We had several faculty members who were awarded grants this year including an internal and extramural one. This past year also saw one of our faculty members appointed to an NIH Study Section; expansion of the Cardiology fellowship; work to develop a Vascular Surgery fellowship; ongoing development of the Low Risk TAVR Continued Access Study; and several CME programs presented by our faculty.

Major Initiatives for the upcoming year include the expansion and/or implementation of several programs such as the aorticand mitral valve programs, VAD, left atrial occlusion devices, outpatient/ambulatory interventional radiology, limb salvage, and ECMO.



BAYSTATE REGIONAL CANCER PROGRAM

Wilson Mertens, MDVice President/Medical Director, Baystate Regional Cancer Program Professor of Medicine, TUSM

SAFETY

- Baystate Regional Cancer Program continues to upgrade its radiation therapy equipment, installing the third Elekta Versa linear accelerator in early 2018; this is part of a phased replacement of all four accelerators scheduled to be fully completed by 2019.
- The pharmacy at the D'Amour Center for Cancer Care is being redeveloped, enlarged, and re-located on the third floor of the cancer center to satisfy new regulations and handle significant increases in volume; anticipated to begin operations in FY 2019.
- Expansion of the D'Amour Center for Cancer Care is also underway, expanding the cancer center's infusion suite adding eight additional treatment chairs and an additional private treatment room, optimizing nursing workflows to enhance patient safety.
- Baystate Regional Cancer Program completed updated standardized ordering for oral antineoplastic drugs combining treatment plans and standardized prescriptions and supportive care medications, and standardized monitoring parameters, as well as intravenous antineoplastic agents, which incorporate appropriate, national guideline compliant supportive care medications.

OUALITY

• Baystate Regional Cancer Program continues participation in the American Society of Clinical Oncology's Quality Oncology Practice Initiative, achieving excellent scores on ongoing data review.

EXPERIENCE

- Baystate Regional Cancer Program's patient satisfaction scores achieved target, demonstrating significant improvement this past year. Additionally, plans are currently underway to form a Cancer Services specific Patient Family Advisory Council (PFAC) in FY19.
- Construction will soon be completed for the expansion of the Baystate Regional Cancer Program's infusion suite and cancer center located at Baystate Mary Lane Ambulatory Center, as well as the D'Amour Center for Cancer Care's infusion suite.
- The Baystate Regional Cancer Program achieved an overall 4.39 result from the Press Ganey employee satisfaction survey this past spring, exceeding the overall score of BH and BMC. Program provider engagement scores were similarly high.

VALUE

- The program continues with high compliance with all cancer-associated "Choosing Wisely" recommendations supported by the American Society of Clinical Oncology, the American Society of Radiation Oncology, and the American College of Surgeons.
- Baystate Regional Cancer Program and Baycare are collaborating on development of an ambulatory "oncology bundle" to help drive high value paired with high quality for patients in our Medicare ACO, and other value-based arrangements.
- Volumes continue strong, with increase in cancer market share based on tumor registry and referral data. The program has exceeded all FY18 budget targets on the BMC and BMP entities while upgrading significant equipment replacements and enhancing cancer treatment technologies.

ACADEMIC INNOVATION

- BRCP commenced an interdisciplinary molecular tumor conference, with support from Medical Oncology, the Department of Pathology, and the Cancer Program Clinical Trials Unit. Multiple patients with next-generation sequencing results are discussed, and treatment options as well as clinical trial opportunities considered.
- BRCP was selected to join ACCRU (Academic and Community Cancer Research United) clinical trials group, with the intent of expanding the program's earlier-phase and supportive care clinical trials offerings.



BAYSTATE NEUROSCIENCES & REHABILITATION

Edward Feldmann, MD, FANA, FAHAVice President and Medical Director, Neurosciences and Rehabilitation, BH
Chair, Department of Neurology
Professor of Neurology, UMMS-Baystate

The Baystate Health Neurosciences Service Line comprises the Department of Neurology and the Divisions of Neurosurgery and Physical Medicine and Rehabilitation and is charged with caring for patients in our region with health issues related to these areas. We are the tertiary referral site for Neurosciences for western Massachusetts, providing state-of-the-art, technically advanced care for stroke and other time-sensitive diagnoses. We had several important accomplishments in 2018 that served to advance our health system's goals:

SAFETY

- Fall Prevention Initiative: 88 patients referred to PT resulting in 450 visits.
- Awarded Harold Grinspoon Entrepreneurial "Concept" Award."

OUALITY

- Emergency Department patients with low back pain prescribed physical therapy as an alternative to opioids in a focused effort to reduce opioid exposure.
- American Stroke Association 2018 Get With the Guidelines STROKE Gold Plus and Target Stroke Honor Roll Elite Plus.
- American Academy of Sleep Medicine full laboratory reaccreditation including Out-of-Center Sleep Testing HST accreditation.
- Rehab Performance Improvement Quality Metric increased from 61% to 73%.

EXPERIENCE

- Neurosurgeon awarded Press Ganey 5-Star Excellence award.
- Only sleep laboratory in region to perform Adaptive Servo Ventilation (ASV) to treat obstructive sleep apnea.
- Developed Geriatric Stroke Program to provide specialty neuro-rehab care in the subacute nursing facility setting.
- Spine Program funding and collaborative agreement initiated with community partners.
- Intrathecal baclofen pump program expanded to include intrathecal baclofen trials: not available anywhere else in western Massachusetts.
- Rehab: Press Ganey Engagement Survey scores improved from 4.10 in 2017 to 4.29 in 2018.
- Staff expanded Sports Medicine at Shriners Hospital for Children.
- Baystate Medical Center Neurodiagnostics and Sleep Center established "Gold Card" HNE status.

VALUE

- Direct Margin \$11.4M FYQ2 YTD: 3,776 more cases and \$885K increase year over year.
- Increased Split Night Polysomnography testing to eliminate return visits.
- Assumed comprehensive management of Neurodiagnostic and Sleep Services at BMLH/BWH and BFMC including Rehabilitation Care.

ACADEMIC INNOVATION

- Rehab Clinicians provided 27 clinical affiliations this fiscal year for area physical, occupational, and speech language pathology graduate programs.
- The Neurodiagnostics and Sleep Center has a new affiliation with Laboure College Neurodiagnostics program.



BAYSTATE PRIMARY CARE

Elizabeth Boyle, MDVice President Primary Care & Clinical Integration
Assistant Professor of Medicine, UMMS-Baystate

The Primary Care service line and its practices provide care for over 105,000 adults and over 12,600 children in western Massachusetts with over 240,000 annual visits across 17 distinct practice sites in our region. Our affiliation with several community primary care practice groups, such as Cardiology and Internal Medicine Associates, Western Mass Medical Group, Valley Medical Associates, and Springfield Medical Associates delivers primary care to another approximately 28,000 patients.

SAFETY

- To improve access to our practices, we added more than 39,000 same day/next day visits and nearly 8,000 new patient visits.
- We have advanced our training and reporting of "near-miss" potential safety events.

OUALITY

- Collaborating with BMP Endocrinologists to pilot improved care of diabetics in a cross-disciplinary learning collaborative; we implemented diabetic point-of-care hemoglobin A1c testing at all sites and increased staff training around hypertension to improve outcomes.
- Top decile performance in HEDIS measures, supporting our success in the Next-Generation Medicare ACO and other risk contracts.
- Created a Primary Care Service Line Quality Council to share and spread best practices among our 15 sites.
- Continued advancement of patient-centered care with further investment in resources including care coordination, case management, and Integrated Behavioral Health services in our primary care practices.
- With IT we received a \$400,000 grant to optimize our knowledge of our Medicaid patients to enhance population stratification, segmentation, and actionable engagement with patients.

EXPERIENCE

- Press Gainey 5-Star Performers in "willingness to recommend" at 40% of our practices.
- Deployment of programs to enhance skill development with Motivational Interview and Advanced Care Directive trainings to providers and upcoming Compassionate Connections workshops.
- Contributions to the BMP Provider Wellness Advisory Council by collaborating and directing pilot initiatives to improve work-life balance.

VALUE

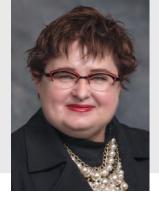
- We have nearly universally adopted a care model involving interdisciplinary teams including more Advanced Practice Practitioners (APP). Process improvement teams are multidisciplinary and aim to reduce friction points and add value for our patients.
- All new APP and numerous existing providers are being trained in tele-visits so that we can provide alternative and affordable visit types to our patients to enhance access to care.

ACADEMIC

- Our providers serve as Longitudinal Preceptors, participating in the ambulatory training of UMMS-Baystate students.
- The medical school helps Baystate Health address the region's urgent need for primary care physicians by building a pipeline of students more likely to remain in our health system.

MAJOR CHALLENGES

- There is a shortage of primary care providers nationally and recruitment to replace retirements and attrition continues to be challenging.
- Payments for alternative visits such as nurse, phone- and tele-visits continue to lag and are a challenge to maximizing our multidisciplinary teams and innovation.



ADVANCED PRACTITIONERS

Lisa Erickson, DNP, CNP, ACNP-BCDirector of Advanced Practitioners

The BMP Advanced Practice Providers (APP) comprises numerous heterogeneous teams with different duties, scopes, and domains. However, we have created a governance structure that has enabled us to unite these teams under an aligned mission. During 2018, several important accomplishments demonstrate that we have made significant progress.

QUALITY/SAFETY/VALUE

Continuing to grow our representation on committees, the APP were added to the multidisciplinary peer review committee. We also now have APP representatives on all the BMP Board committees. This past year we developed and implemented several new APP teams: MICU/SICU, Ortho-Trauma, and Urology.

EXPERIENCE/PROVIDER ENGAGEMENT

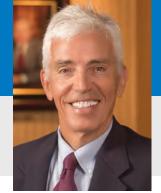
This year we had six APP staff that were recognized by Professional Research Consultants (PRC) as 5-Star performers in patient experience. The APP leadership team held our first fall celebration, in which we recognized our national provider weeks, welcomed our new hires, recognized our 5-Star providers and said good-bye to those who retired. The APP Training pod at BMP-South Hadley Adult Medicine expanded and now assists with the onboarding and training of new graduate APP in primary care and the community health centers. The APP leadership team developed the APP Spotlight newsletter that highlights the work of individual APP.

ACADEMIC INNOVATION

The UMMS-Baystate faculty appointments of APP have grown to seven. We have seen an increase of podium presentations to ten. There were eight APP facilitated submissions for the Presidents Excellence Award. We have seen continued growth of APP related PI projects and participation in research, one of which they are the study coordinator. The preceptor training course continues and to-date we have trained 64 additional staff.

CHALLENGES

The demand for student placement with Baystate Health has increased over the past year. While we have trained additional staff, we are still faced with a shortage of preceptors.



2018 BAYSTATE MEDICAL PRACTICES

Region Highlights

BAYSTATE HEALTH EASTERN REGION (BHER)

David Maguire, MDChief Medical Officer
Baystate Health Eastern Region and Baystate Wing Hospital

The Regional/Integrated Care model continues to be the driving force behind our strategic thinking for planning and implementation in the BHER. In its most basic form, this means providing appropriate community-based care for the Eastern Region, with the caveat that not every service will be at every site. BHER currently comprises two Emergency Departments, six primary care sites, a large outpatient behavioral health unit, one inpatient facility at Baystate Wing Hospital with Med/Surg, Geriatric and Adult Psychiatry Units. There is also a large facility at Baystate Mary Lane Outpatient Center with multiple current and potential future functions, such as the soon-to-be-opened Healogics Wound Care Center and a women's health center incorporating 3D mammography, bone densitometry, and gynecologic care, as well as a robust and recently expanded regional oncology unit.

SAFETY QUALITY

- Realignment of all surgery to Baystate Wing Hospital.
- All outpatient endoscopy to Baystate Mary Lane Outpatient Center.
- Integration of Emergency Department and Hospitalist service lines within the BHER and with Baystate Medical Center.
- Initiation of cross coverage arrangements with Baystate Noble Hospital in Cardiology (i.e. via telehealth) and General Surgery.
- All BHER hospitalists trained through the "Fundamentals of Critical Care" course at Baystate Medical Center and have rotated through the intermediate care units at Baystate Medical Center.
- Relocation and expansion of all echocardiography, cardiac nuclear imaging, and stress testing to the Baystate Wing Hospital Cardiovascular Center.
- Establishment of a robust multidisciplinary Peer Review Committee with monthly case reviews.

EXPERIENCE

- Opening of the new Emergency Department facility at Baystate Wing Hospital providing privacy and dignity to our patients.
- All hospitalists participated in Empathetics training.
- Development of a patient experience improvement road map by the senior management team and stakeholders.

VALUE

- Initiation and expansion of Plastic Surgery program at Baystate Wing Hospital.
- Completed construction of Healogics Wound Care Center at Baystate Mary Lane Outpatient Center.
- Successful sharing of medical sub-specialty providers between Baystate Medical Center and BHER.
- Emergency Department provider training in ultrasound with concomitant quality and revenue improvements.
- A Baystate Health pilot program, initiated at Baystate Wing Hospital, in clinical documentation improvement, resulting in substantial improvement in coding, case mix index, and gains in revenue.

ACADEMIC

• Welcomed PURCH students from the UMMS-Baystate to Baystate Wing Hospital.

CHALLENGES

- The demographics of the Primary Care providers, e.g. age, as well as the need to service a geographically large service area.
- Right-sizing and supporting community-based orthopedics.
- Need for expanded medical subspecialties that are in short supply, e.g. Pulmonary, Endocrine.
- Increasing the utilization of unused operating room- and surgical capacity.
- Improving patient experience.



BAYSTATE HEALTH NORTHERN REGION (BHNR)

Kinan K. Hreib, MD, PhD, MBAChief Medical Officer
Staff Neurologist
Baystate Franklin Medical Center

The Baystate Health Northern Region (BHNR) comprises Baystate Franklin Medical Center in Greenfield and several primary care and multispecialty practices extending from Northampton to Turners Falls.

SAFETY

BFMC has outperformed its target metrics in every measure except for post-operative sepsis (see below). A working group has been established to identify additional opportunities for improvement. One of the major, interdisciplinary projects upon which we have embarked is the safe patient handling program, which is intended to move patients in a safer fashion and decrease staff injuries.

QUALITY

BFMC will be recognized in the 2018 "Best Hospitals" edition of the US News & World Report for our "Get with the Guidelines Stroke Gold Plus & Target Stroke Honor Roll" award. As Franklin County suffers from a very high prevalence of opioid use disorder (OUD), BHNR has instituted several programs to address this. We have a robust inpatient treatment unit for these patients, and our Women's Health providers have several successful and nationally recognized programs for mothers suffering from OUD and infants at risk for neonatal abstinence syndrome.

EXPERIENCE

We continue to experience some challenges in this metric. However, the outpatient surgical practices exceeded target goal with an 82.3% willingness to recommend score. On the inpatient side, improvement has already been seen, although we are not currently at target. Opportunities for improvement include explaining care to patients in a way that they could understand and engaging patients in a thoughtful and productive way in the decision-making regarding their care. Our efforts are focused on improving communications among the providers and with the patient and to address potential concerns contemporaneously.

VALUE

We continue to adjust to the reality of value-based purchasing; although more established for hospital services, this payment model is expanding into the outpatient practices:

- For our hospital programs, as of 2017, the most recently available data, we earned back the 2% reduction plus an additional 0.79%.
- We have an ongoing operating room lean project looking at potential inefficiencies to improve patient flow.
- We are evaluating post-op protocols for consistency and utilization of best practices.



BAYSTATE HEALTH WESTERN REGION (BHWR)

Britton T. Percy, MDChief Medical Officer
Baystate Health Western Region
and Baystate Noble Hospital

SAFETY

- Suicide Risk Assessments rolled out in all patient care areas, allowing staff to recognize their high risk patients. BNH has a Mental Health Counselor that follows up on these patients personally and helps assess when psychiatry or crisis referrals are necessary.
- Inpatient nurses now carry phones that are integrated with call bell system and hospital alerts.

OUALITY

- The START project of medical record and electronic systems conversion continues on schedule with target go live March 22, 2019.
- Surgical policies have been reviewed and updated, with now approximately 80% concordance with Baystate Health policies.
- Block scheduling review in the ORs has resulted in accommodation of new block time for BMP surgeons in gynecology, urogynecology, breast surgery, and general surgery.
- Additional Cardiologist has been added 1-2 days/week to assist in consults, follow-ups, stress tests, and echocardiograms, to start October 2019.
- Cardiology at BNH and BWH has moved to a combined call coverage starting the third week in October. Telemedicine consults will be performed when a given cardiologist is covering the other hospital.
- System standardization of Intercare protocols has been completed for three of the top six community ICU diagnoses, with two others to follow imminently. This will allow rotating hospitalists to have access to the same treatment protocols regardless of facility.

EXPERIENCE

- New lobby renovation completed Summer 2018.
- BMP Cardiology has moved from off site to a location next to the main entrance at BNH.
- All hospitalists have completed "Compassionate Connections" and "Empathetics," aimed at improving provider communication and the practice of empathy.

VALUE

- Process changes were enacted in the OR for endoscopy which has increased endoscopy patient access and decreased no shows.
- Daily participation of Clinical Documentation Improvement nurse in multidisciplinary team rounds in order to improve documentation and coding.

New Physicians and Advanced Practice Clinicians



Omar Abduljabar, MDDepartment of Medicine
Baystate Health Hospital Medicine



Nurpur Aggarwal, MD Community Primary Care Service Line BMP—Wilbraham Adult Medicine



Albert Agomaa, MD Community Primary Care Service Line BMP—Pioneer Valley Family Medicine



Peter Alfano, PA Community Primary Care Service Line BMP—Quabbin Adult Medicine



Mazen Al-Mansour, MD Department of Surgery Baystate General Surgery



Mackenzie Babb, PA
Department of Pediatrics
Baystate Newborn Medicine



Chadd Baer, PA
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Anne Bayerle, NP
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Baystate Brightwood Health
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Celene Boyce, NPDepartment of Surgery
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Megan Davis, NP
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Neighborhood Health Center



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Amanda Duffy, NPDepartment of Medicine
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Megan Gallagher, MDDepartment of Medicine
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Yesenia Greeff, MDDepartment of Medicine
Baystate Gastroenterology



O'Neil Green, MDDepartment of Medicine
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Ilyssa Greenberg, DO
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BMP–Northern Edge Adult Medicine



Jeffrey Hammond, NPCommunity Primary Care Service Line
BMP–East Longmeadow
Adult Medicine



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Baystate Infectious Diseases



Maryam Hasan, MD Department of Medicine Baystate Geriatrics, Palliative Care & Post Acute Medicine



Jeffrey Hayer, MD
Department of Surgery
BMP–Valley Orthopedic Surgery
& Sports Medicine



Kinan Hreib, MD Chief Medical Officer, Baystate Franklin Medical Center and BH Northern Region



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Baystate Home Health and Hospice



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Jessica LaFleche, NPDepartment of Medicine
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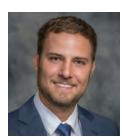
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Zachary Testo, MDDepartment of Emergency Medicine
Baystate Emergency Medicine



Kaylan Thibodeau, PADepartment of Medicine
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Emily Urquhart, MDCommunity Primary Care Service Line
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Laura Warren, NP Heart & Vascular Service Line Baystate Cardiology



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Lauren Westafer, DODepartment of Emergency Medicine
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Eileen Whalen, MDDepartment of Emergency Medicine
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Miriam Wiggins, PA
Department of Surgery
Baystate Medical CenterDepartment of Surgery, Orthopedics



Malyssa Williams, PA Neurosciences and Rehabilitation Service Line Baystate Neurology



Susan Williams, NPDepartment of Psychiatry
Baystate Behavioral HealthGriswold Center



Nathan Wilson, MD Department of Emergency Medicine Baystate Emergency Medicine



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Women's Health

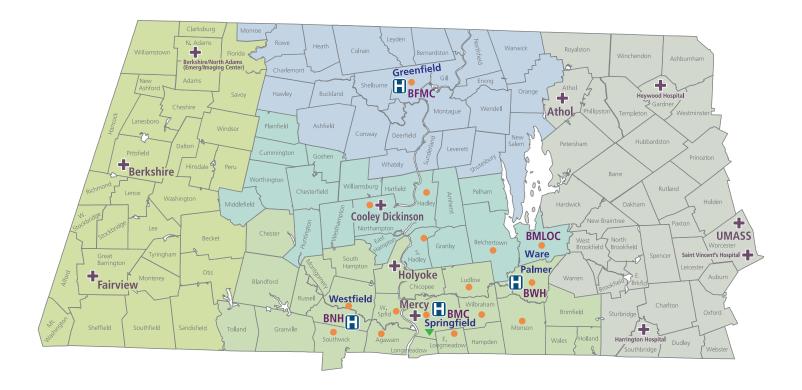


Richard Woller, PADepartment of Medicine
Baystate Gastroenterology



Rama Yarasani, MD Department of Psychiatry Baystate Wing Hospital

Baystate Health Service Area



- Baystate Franklin Medical Center (BFMC) Greenfield Baystate Medical Center (BMC) - Springfield Baystate Noble Hospital (BNH) - Westfield Baystate Wing Hospital (BWH) - Palmer
- **▼** Baystate Home Health
- Non-Baystate Hospital
- Baystate Medical Practices
 Baystate Mary Lane Outpatient Center





Baystate Health 2020

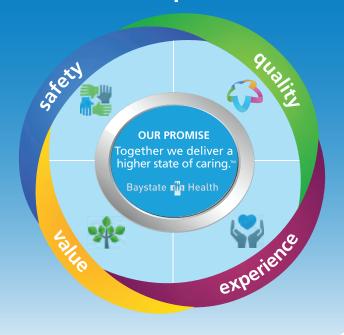
Mission

To improve the health of the people in our communities every day, with quality and compassion.

Caring Values

Quality
Compassion
Service
Teamwork
Innovation

Compass



GOALS

ASPIRATIONS

MEASURES



Together, we will create a culture of safety with the shared goal to consistently provide safe, timely, reliable care.

Every patient will be free from harm.

Top 20% safest health systems in the nation.



Together, we will achieve today's best practices while setting the standard for tomorrow.

Setting the national standard for clinical excellence.

Top 20% in performance in outcomes and processes of care.



Together, we will listen to our patients and their families, and partner with them to meet their needs and improve their lives.

Every patient recommends
Baystate Health as
the best for care.

Top 20% in patient satisfaction scores.



Together, we will create a sustainable health system that provides outcomes that matter to patients at an affordable cost to society.

Recognized as the system that provides care that matters at a cost that is affordable.

Top 20% nationally for affordable cost.

