Our Mission
Provide outstanding pharmaceutical care through excellence in clinical pharmacy services, education, research, community service, and to do the right things right.

Our Vision
To be an internationally recognized leader in delivering cutting edge pharmaceutical services including pharmacy operations, staff development, patient education, clinical services, research, and technology innovation.
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Letter from the Executive Director

Greetings Colleagues and Friends,

Please find enclosed our FY2017 Annual Report for the Brigham and Women’s Hospital, Department of Pharmacy Services. This Annual Report highlights a year of many accomplishments within our department. Our collaboration with the Medical, Nursing and other disciplines are critical to the effective delivery of the highest quality of pharmaceutical care we provide.

Over the past year, we have contributed within Partners Healthcare to make changes in the way we deliver healthcare. Our Pharmacy is part of the “Partners 2.0” initiatives that focus on efforts that improve the quality of patient care yet simultaneously reduce healthcare costs. We continue to support the enterprise with EPIC Electronic Health Record implementation with “go live” events at the North Shore Medical Center, Cooley-Dickinson, and the Cape Cod/Island locations.

The renovations of Central Pharmacy-L2 are well underway. We began construction of our new sterile products room and opened our new negative pressure non-sterile compounding room. These areas will streamline workflow and provide space to meet regulatory, patient, and Pharmacy staff needs for a better work day. We are poised for compliance with the MA Board of Pharmacy regulations, the introduction of USP <800>, and the updates to USP <795> and <797>. We will continue to update our service line and prepare products for our patient needs, and maintain relationships to collaborate with outside vendors to assist in meeting our needs.

The end of this fiscal year has been one of the worst in many years as we adapt to the national drug and IV fluid shortages. We have juggled the absence of intravenous fluids and narcotic analgesics, agents that represent the foundation of treatment for patients in surgical and interventional areas. Our Pharmacy Purchasing agents have done a remarkable job at finding available substitutes. Our Pharmacy Technicians have performed heroically in transforming these substitutes into medications that can be seamlessly used by our nurses and physicians.

As a Department, we are now being challenged to play a bigger role in care delivery as patients transition out of the hospital and into the community. Our involvement with ambulatory care is growing through our work with the Cardiovascular Division and their innovative programs targeting the management of hyperlipidemia, hypertension, and heart failure. Our Anticoagulation Management Service continues to broaden their scope of work, now providing support to patients navigating direct oral anticoagulation therapy. Our Outpatient Pharmacy Department (OPD) is increasing its involvement in quality improvement programs that bring our services to the bedside for all patients.
We are growing our transitions of care service line with several projects targeting our unique role in supporting patients in that sensitive time of hospital transitions. Over the past year, our Pharmacy Ambulatory and Transitions of Care Task Force has discussed challenges and opportunities for growth, including avenues for pharmacist billing. We look forward to our continued involvement in this space.

Leadership has worked hard to foster a “Culture of Patient Safety”. Through the initiation of the Executive Pharmacy Quality and Safety Walk rounds as well as the Pharmacy Morbidity Mortality and Process Improvement Rounds, we are working to promote system improvements and help prevent or reduce errors thereby improving the overall quality of patient care.

I would like to recognize the contributions and collaborations of those whom retired from the hospital this year. Bill Churchill, retired as Chief Pharmacy Officer in September after reaching the milestone of 42 years of service at BWH and affiliated hospitals, and 27 years as the leader of our Department. We will miss the expertise of Tom Burke, along with Ilene Burton, Blanca Torres, Jia Zhang, Chuck DeAngelis and Ibrahima Bah. We wish them best of luck as they enter the next chapter of their lives and thank them for their dedication to the pharmacy team!

I hope you will take time to review this report of the dedicated work of our staff and the outstanding accomplishments our team has made over the last 12 months.

We look forward to another great year in 2018!

Warm Regards,

John Fanikos
Administrative and Support Services
Directors of Pharmacy

Michael Cotugno, RPh
Director Pharmacy Patient Care Services

Caryn Belisle, RPh, MBA
Director of Pharmacy Regulatory and Patient Safety

Tom Cooley, RPh
Director of Pharmacy Informatics and Support Services

Lina Matta, PharmD, MPH
Director of Ambulatory Pharmacy and Population Health
This year we welcomed a new senior finance and business manager, Tim Clouser. Tim came to us with 5 years of experience with the BWH Pulmonary and Critical Care team, and has been a part of Partners since 2010. As part of his new role he recently formed the Partners Health Care Pharmacy Purchasing Management Team. He earned his MBA from UMass Boston. He and his wife Natalie have 2 children, Quinn and Wyatt, and a Chesapeake Bay retriever, Falcon. He loves to golf in his spare time.

Bill Churchill retired this year as Chief Pharmacy Officer for Brigham and Women’s Healthcare after 42 years of service at BWH and affiliated hospitals, and 27 years as the leader of our department. A part of the pharmacy leadership team is pictured below with him.

Directors and Managers: Present: Heather Dell’Orfano, Katelyn Sylvester, Megan Rocchio, Angela Triggs, Jon Silverman, Bill Churchill, Lina Matta, Tom Cooley, Caryn Belisle, Paul Szumita, Mike Cotugno, Kevin Anger. (Not photographed: John Fanikos, Tim Clouser, Amrita Chabria)
Purchasing and Quality Assurance

**Purchasing**
The pharmacy purchasing team also recently welcomed a new member. Crosby Nest joined in 2017 as a Pharmacy Purchasing Coordinator. She has previously worked at South Shore Hospital and CVS. She earned her MBA from Curry College. In her free time she likes to travel, sew, read, cook, and try new restaurants. She has two dogs, both Chihuahua mixes named Orson Welles and Olive.

**Quality Assurance**

John Caressimo, MBA
Karen Kelley, CPhT
Crosby Nest, CPhT, MBA

Keely Kwok, CPhT
Quality Assurance Coordinator
Outpatient and Ambulatory Pharmacy Services
Pain Management

Michele Matthews, PharmD, CPE, BCACP
BWH Pain Management Center
& Phyllis Jen Center for Primary Care

"Michele Matthews is a wonderful addition to our team at Brigham and Women’s Hospital. She brings a unique perspective of understanding pharmacotherapy and tailored interventions to contribute, in a big way, to our interdisciplinary approach in managing challenging chronic pain patients. She is bright, motivated, responsible, caring and universally liked by all the patients and staff she encounters. She is a productive educator and researcher and is valued in her collaboration with the many other specialists at our hospital."

- Robert Jameson, PhD

Patient-Reported Outcomes after PharmD Intervention

- 25% ↑ in involvement in daily activities after referral
- 37% improvement in overall mood after referral
- 33% improvement in sleep quality after referral
- 26% ↑ in enjoyment in life after referral

200 patients seen annually
750 patient visits this year
Cardiovascular Innovation Programs

Hypertension Optimization Clinic

The CV Innovation Programs are a suite of population health based initiatives led by the Department of Cardiology and in collaboration with our department and other disciplines. These programs currently enroll patients with hypertension, hyperlipidemia, and/or heart failure with reduced ejection fraction with a focus on population-level optimization of medical treatment as directed by published treatment guidelines.

Each clinic uses P&T Committee-approved algorithms for medication titration that is guided by serial blood pressure, laboratory, and symptom assessment.

Pharmacists work alongside other healthcare providers, including nurse practitioners, physicians, patient navigators, and project managers, as a part of a multidisciplinary team.

Lipids Optimization Clinic

The Hypertension Optimization Program (BP-HOP) manages patients with uncontrolled hypertension by providing patients with a Bluetooth-enabled blood pressure cuff that will record and report all BP readings.

Medication titrations are made based upon weekly home BP averages.

Among the first 100 patients enrolled in the program, blood pressure control was achieved in 87% of patients who completed the program over an average of six weeks.

Virtual Heart Failure and Cardiomyopathy Clinic

Among the first 100 patients enrolled in the program, blood pressure control was achieved in 87% of patients who completed the program over an average of six weeks.
The Lipid Optimization Program (BLO) enrolls patients who receive care at BWH who have hyperlipidemia and do not have LDL levels within an appropriate target goal.

The clinic utilizes an algorithm allowing for drug initiations and titrations.

Among the first 425 patients that were enrolled, after the first two interventions, 68% of patients were able to tolerate a statin, 18% of patients achieved their appropriate LDL goal, and overall mean LDL was successfully reduced by 40% (from 149 to 89 mg/dL).

The Virtual Heart Failure and Cardiomyopathy Clinic enrolls patients with heart failure and reduced ejection fraction with the goal of titrating patients’ medication regimens to meet guideline-directed targets.

This includes medication initiation and titration, as well as appropriate monitoring, for cornerstone therapies, including ACE inhibitors, ARBs, ARNI, beta blockers, aldosterone antagonists, ivabradine, hydralazine, and nitrates.
Primary Care

Number of patients managed under DM protocol
443 total since July ‘13
132 under active management

Number of patients managed under HTN protocol
113 total since June ‘15
22 under active management

Baseline A1c and change in A1c after RPh intervention
Baseline A1c 9.7%, after RPh intervention 8.2%
Average change -1.5 points

Number of post discharge visits
174 patients in FY’17

New Initiatives

The primary care pharmacists have an ongoing collaboration with the Population Health managers as part of an initiative to improve the Internal Performance Framework (IPF) Partners Quality Metrics for the diabetes registry.

This includes monthly huddles to discuss patients who are not meeting the metrics, and who have visits scheduled in clinic the following month.

These cases are reviewed to determine what intervention is appropriate (i.e. medication titration, referral to PharmD or nutritionist for ongoing management), and communicated to PCP to be discussed at their upcoming appointment.

CDTM Services
Hypertension
Diabetes
Dyslipidemia

Jennifer Allen, PharmD, BCACP, CDE
Primary Care Associates, Longwood

16 Brigham and Women’s Department of Pharmacy
Amy Bilodeau, PharmD, BCACP
Phyllis Jen Center for Primary Care

Other Services
Medication adherence counseling
Post discharge visits
Smoking cessation counseling
Vaccine administration

“Kaitlin is an amazing addition to our team here at South Huntington. She takes excellent care of the patients she sees, so much so that many of my patients that she also sees will start off my visits asking about her and then telling me all that they learned from their visit with her. Her med reconciliation and post-discharge visits are invaluable and through them I have discovered so much about my patients and their relations to their medicines. In addition, she is always up to date on new guidelines and treatment options and has been actively involved in teaching all of the staff from front desk to doctors. Her care and expertise are invaluable.”

Aaron Mann, MD
South Huntington Primary Care

Kaitlin O’Rourke, PharmD, BCPS
South Huntington Primary Care

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Anticoagulation Management Services

BWH AMS Staff
- Pharmacists: Pharmacy Leadership, 9.5 Pharmacists, 4 per diem Pharmacists
- Multiple pharmacists recognized as Certified Anticoagulation Care Providers
- Program Coordinator
- Two Co-Medical Directors
- Interns: 4 Pharmacy Interns

- BWH AMS recognized as an Anticoagulation Center of Excellence by the AC Forum
- Credentialed Midlevel Practitioners working under an Anticoagulation-related Collaborative Practice Agreement

BWH AMS Manages Approximately 3,000 Patients on Anticoagulation for a Variety of Indications

- Warfarin Patients = 2800
- DOAC Patients = 32
- Self Testing Patients = 410
- Self Management Patients = 20
- Cardiac Surgery Referrals = 172
- Orthopedic Surgery Referrals = 626
- New Patient Referrals = 593

Publications, Guidelines and Events
- Monthly AMS M&M Conference led by rotating AMS Pharmacist
- Hosted the 11th Annual U.S. DawnAC UserGroup Meeting
- Updated Hospital-Wide Anticoagulation Guidelines
  - DOAC Management Plan
  - DOAC Conversions Guideline
  - DOAC Dosing Guideline
  - DOAC Drug Interactions Guideline
  - DOAC Perioperative Guideline
  - Periprocedural Anticoagulation & Bridging Guideline
Workload Metrics
- ~ 68,000 INRs Dosed
- ~ 1,000 Peri-procedural Anticoagulation Plans Created
- ~ 400 New Patient Educations
- ~ 2800 Annual Reviews
- Additional Services Include: Standing Orders, Medication Refills, and Ongoing Patient/Provider Anticoagulation Education

AMS Quality Metrics
The following metrics are evaluated for the general population and patients with Ventricular Assist Devices and are compared against national benchmarking data
- Time in Therapeutic Range
- Critical High and Low INRs
- Anticoagulation-Related Events

![BWH AMS Time in Therapeutic Range](chart.png)

![Event Rates All AMS Patients](chart.png)
Outpatient Pharmacy Services

120,000
Prescriptions dispensed in FY’17

33 minutes
Average wait time in FY’17

> 1,500
Bedside deliveries in FY’17, of which 170 were glucometer teachings

401 pounds
Waste shipped to be destroyed at drug takeback programs in FY’17

196
Vaccinations administered (including Zostavax) in FY’17

Vaccination administration was a new initiative for FY’17

All of the pharmacists who work at 45 Francis St received certification to vaccinate through Northeastern University

Tanya and Katie led the initiative and helped develop our protocols

Our next step is to get ready for Shingrix
850 Boylston St’s big project in FY’17 was the transition to a new intrathecal vendor.

In August, OPD at 45 Francis St transitioned to AIS as the preferred vendor.

New staff member: Tamara Roldan, RPh

Infusion Center - 60 Fenwood Rd

~15,100 patient visits
14,440 infusions prepared
441 patients counseled

To help decrease the volume of sterile products that need to be made in the temporary clean room, the infusion clinic pharmacy has also been compounding all of the sterile products needed for Watkins Cardiovascular Clinic.

New medication added to formulary: Ocrevus (Ocrelizumab)
Transitions of Care
Transitions of Care Pharmacist Updates

iCMP (integrated care management program) is a multidisciplinary, longitudinal care management program designed to meet the needs of 3,000 high-risk, medically complex patients. Patients are identified for iCMP based on patient comorbidities, complexity, and healthcare utilization.

Channel DeLeon, PharmD, BCGP and Katherine McLaughlin, iCMP Project Coordinator

Helping our students find their “aha” moments.
That’s Channel De Leon’s way.
Integrated Care Management Program

That’s the Brigham Way
BCRISP Project Title:
Improving Continuity of Care for Patients on High Risk Medications

Background:
BWH residents have identified challenges in establishing medication access as contributing significant time to the discharge process.

There have been several incidences of patients being readmitted to BWH due to access challenges and educational barriers, specifically for high risk medications.

Proposed Solution:
Implement a transitions of care pharmacist intervention into a cardiology team to decrease medication errors and enhance patient medication education and medication access.

Brigham Care Redesign Incubator and Startup Program (BCRISP) program awarded the pharmacy department a $50,000 grant for this pilot program.

BCRISP focuses on pilots designed to emphasize innovation aligned with Brigham Health’s strategic priorities and are focused on increasing efficiency, reducing costs, increasing revenue, and improving quality.

4 month pilot launch date:
February 6th, 2018

Executive Sponsors:
Shelly Anderson SVP; Kathryn Britton MD, Assistant CMO; John Fanikos RPh, MBA, Executive Director of Pharmacy
BCRISP team members: Amrita Chabria PharmD, Channel De Leon PharmD, Lina Matta PharmD, Jillian Dempsey PharmD, Christine Gillis PharmD, Katelyn Sylvester PharmD; (not photographed) Jean Connors MD, David Faxon MD, Emily Hinchey MBA, Nadine Palermo DO
Inpatient Pharmacy Services
Central Pharmacy

The heartbeat of the entire inpatient pharmacy operation, central pharmacy, remains a busy place. Over 2,000 patient-specific doses are prepared and sent hospital wide every day.

To the outsider, looking in (probably from the service window) it looks like chaos. However, there is a method to the madness and the daily operations run smoothly due to a dedicated group of pharmacists, technicians, student interns, and management all working together. There are a lot of moving pieces to the puzzle, including process changes and personnel changes, but the job always gets done.

This year has also brought some remodeling to our central pharmacy as well. After a brief closure, the area in-between the vault and the IDS pharmacy re-opened having been newly renovated. The new space features an open layout and provides our technicians with a clean and bright workspace to perform their daily tasks.

Additionally, an office has been renovated and retrofitted to meet standards for non-sterile compounding. It is here, that technicians draw up oral syringes within the laminar flow hood. The sterile products room coordinator station has also moved to the central pharmacy. Sterile products are then prepped here and brought to the temporary sterile products room by the IV runner.
Clinical Pharmacy Overview

90% of ICU teams have a dedicated clinical pharmacist during rounds

BWH ED has 24-hour coverage with clinical pharmacists

General medicine teams have 3 BWH clinical pharmacists and 2 professors dedicated to patient rounding

Lung, solid organ, and heart transplant teams all have a dedicated clinical pharmacist on rounds

Cardiology teams have 2 BWH clinical pharmacists and 1 professor dedicated to patient rounding

Oncology teams have 2-4 clinical pharmacists involved with patient rounds

Allergy has a clinical pharmacist dedicated to patient rounds and medication desensitizations

“The clinical pharmacists in the MICU are an instrumental component of our interdisciplinary team. The entire team depends upon their clinical expertise and evidence based knowledge to tailor the patient’s treatment plan to optimize outcomes. Whether the question is regarding proper drug administration or current drug practices they are always readily available to patiently address all concerns. These individuals make a significant contribution on a daily basis to patient care.”
- Carol Daddio Pierce, MS, RN, CCRN, MICU Nurse Educator

"Critically ill patients are at risk for multi-organ failure and death and experience rapidly changing physiological conditions that require timely intervention and support. Optimal treatment of these patients is dependent on the frequent close working collaboration of critical care physicians and pharmacists to determine appropriate therapy in the setting of such dynamic conditions.

Our critical care pharmacists serve an invaluable role in the care of our critically ill patients by guiding and determining therapy, monitoring for response, and in reducing harmful effects. Integration of our pharmacists into the critical care team is a vital component of providing effective multidisciplinary care for our ICU patients.”
- Steven Keller, MD, PhD, ICU Attending
“Our pharmacists are extremely approachable, knowledgeable, and imperative for patient care”

- Kelly Ackerman, RN, BSN

“As an inpatient VAD physician assistant, I work closely with the Hemostatic Antithrombotic Team pharmacist. Specifically, we meet on a daily basis, Monday-Friday, to discuss each VAD patient’s antithrombotic strategy for the day. This collaboration has very much added to the thoughtful care we provide to this unique patient population. The pharmacists are always easy to reach and are exceptional in their knowledge base. “

- Erin Lyons, P.A.-C

“Working as a team is essential for safe and effective patient care. Pharmacists being one of the most vital players within this team, whether it be answering medication related questions, checking compatibility, or advocating for what is best for their patients. I could not get through my day without them.”

- Kerri Mennella, RN, CCRN

“I am thankful every day that Keri, our transplant pharmacist is assigned to our team! Our transplant patients are complex. I gratefully acknowledge the detailed knowledge and skill that Keri brings to the management of our patients. Her plate is overflowing, and Keri is involved with every stage of our transplant patients. She is awesome and absolutely vital to our team. I would like to share a specific collaboration example: when a pulmonary transplant fellow starts with our team, I advise the fellow to look at Keri when they start to make medication recommendations. If she is nodding her head, their recommendation is good. If she is not nodding her head, we should stop and further discuss w/ Keri. Her recommendations and collaboration are the key to managing our patients!!”

- Kathy Gauthier, P.A.-C
The pharmacists in the emergency department are not only a valuable asset to all patients in the ED, but especially for critical patients. They are an essential part of the team and patients get better care with their expertise at the bedside.”

- Alexis McCabe, MD  Emergency Medicine Resident

“I am so grateful for the pharmacy team here. I thought it was the norm everywhere, and I didn’t realize how good I had it until I started working in the community. I would have questions regarding alternative antibiotic coverage for patients with allergies, or questions regarding insulin, and the pharmacists in the community would ask me to look it up in UpToDate, or just say they didn’t know. I feel like at BWH, if I have any questions or concerns, I can rely on the pharmacy team. I have also made mistakes which were caught quickly when reconciling patients home meds (I’m picturing you, Dave!). Everyone is so approachable, and I never feel like I’m being judged with my Pharm questions. Thank you for all that you do!”

- Lauren Fellion, PA-C

Comprehensive Stroke Center Certification

ED and Neuro ICU pharmacists were part of the CSC team. The ED pharmacists play a role in the use of thrombolytic therapy for acute ischemic stroke patients and are also consulted for anticoagulation reversal strategies for intracranial hemorrhage. With the help of the ED pharmacists, 100% of thrombolytic therapy is given within 60 minutes of arrival, an important measure of comprehensive stroke centers.

Although ED pharmacists have historically responded to Code Trauma in the ED, they have now been added to the official Code Trauma response team.
### Allergy

**BWH Inpatient Consult Service**

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<td>Graded Challenges</td>
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<tr>
<td>Skin Tests</td>
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**BWH Outpatient/Ambulatory Service**

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<td>Graded Challenges (BTM)</td>
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<tr>
<td>Skin Tests (850)</td>
<td>96</td>
<td>188</td>
<td>173</td>
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“Kathy has an incredible breadth of expertise and is a truly invaluable part of our inpatient consult team and outpatient clinical service – we could not see the volume of patients we do without Kathy. I know I speak for all of our team when I say that Kathy’s knowledge and dedication to our allergy patients improves their care every day.”

- Kate Tuttle, MD

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**Presentations**

- Advancements in Medication Safety and Clinical Pharmacy Practice at Brigham and Women’s Hospital Symposium - Innovative Roles for Pharmacists: Implementation of an Allergy Pharmacist Position
- BWF venom program in-service this is being transition over to BWF given shortage of extracts and BWH MICU constraints – I have gone over to BWF to give an in-service on prep to BWF SPR

**Continuing Education**

- Update and overview of the Drug Desensitization Program – Pharmacy
- Perspective and Inpatient Testing – CME accreditation

**Policies**

- Non-Chemotherapy Desensitization Nursing Policy
- Penicillin/Cephalosporin Hypersensitivity
- Challenge Protocol Nursing Policy
- Chemotherapy Desensitization best practice

**Partners Drug Formulary Reviews**

- CDP guideline for mepolizumab (Nucala) - presented on March 14, 2017 at PPTC

**Clinical Expert/SME panels**

- PeC Allergy Clinical Consensus Group
- PeC Non-Oncology Infusion Enterprise Expert Panel (Ambulatory Therapy Plan Committee)
- PeC Desensitization order set clinical content workgroup
Emergency Department Medication Reconciliation Support Team

Obtaining a “Best Possible Medication History (BPMH)” is an important way to decrease reconciliation errors and increase patient safety at hospital admission. It also subsequently decreases adverse drug events during hospitalization and reconciliation errors upon hospital discharge.

The Medication Reconciliation Support team (MRST) provides a BPMH for all General Medicine patients on teams GMS B-D and ITU A/B within 24 hours of admission. This enables the physician to review and reconcile the patient’s medication list in a timely manner and address potential medication issue early in the patient’s hospital course. The BPMH is performed by trained and certified pharmacy interns under the supervision of a pharmacist and is communicated to the responding clinician via an epic note and direct page.

Over the last year the program has trained 3 Co-op students, and welcomed 7 pharmacy interns to the program. This has enabled us to offer a consistent and reliable service Monday to Friday from 10am to 10pm, and 10am to 6pm on weekends. From October 2016 to September 2017, the Pharmacy Medication Reconciliation Support Team has collected over 4,000 medication histories for GMS patients. This has helped to identify and correct over 35,500 medication discrepancies, and average of 8.5 medication discrepancies per patient admission.

We look forward to continuing to grow and develop the program this coming year!

“From my standpoint it’s (MRST program) been noticeably more effective than prior iterations. The pharmacy folks have been responsive to emailed questions, the completion seems to be high quality, thoughtful, and reliable. Every few patients also identifies something materially different than what would otherwise have been captured”

- Matthew Vitale, MD

“Physician feedback for the project has been overwhelmingly positive, with the majority reporting that the medication histories are high quality and provide essential information for medication reconciliation”

- Joel T. Katz, MD, MACP; BWH Medicine Residency Director
The chart above illustrates the type and quantity of medication discrepancies identified and addressed by the Med Rec Support team.

Discrepancies include all changes made to the Prior to Admission Medication List (PAML) by the pharmacy team and include medication added, deleted, changed (strength, dose, or directions), and variances in administration by the patient from that prescribed by a physician.
Hemostatic Antithrombotic Stewardship

HAT Stewardship over the past fiscal year has:

- Represented $2,365,578.24 charges for blood factors
- Recommended 1,465 warfarin doses for VAD patients
- Assisted in over 100 ‘inpatient’ anticoagulation service consults
- Created and updated several BWH guidelines, including:
  - Peri-op Diffuse Bleeding Guideline
  - Hemophilia A&B, Von Willebrand Disease Guideline
- Published many book chapters and articles in peer reviewed journals
- Precepted 5 PGY-2 Critical Care and Cardiology residents

Presented at:
- Mini Oral Presentation at ISHLT Conference, San Diego, CA
- Cardiology Grand Rounds Metrowest & Framingham
- Poster at ISTH Congress, Berlin, Germany
- BWH Vascular Medicine Grand Rounds
- NHSHP CE: Anticoagulation Pearls
- BWH AMS M&M

DTI Use in Suspected/Confirmed HIT

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Inpatient Pharmacy
Project Highlight:

**Omnicell Optimization Project**

Optimization of the automated dispensing cabinets (ADCs) helps to ensure medications are readily available for nursing staff and streamlines distribution processes for the Pharmacy Department. A previous pilot analysis demonstrated a decrease in overall cabinet cost while increasing medication inventory. This project aimed at expanding this to adult inpatient areas at BWH. The three main goals of this project were to decrease inventory cost on the ADCs, increase medication availability on the ADCs, and to decrease the amount of medications dispensed from central pharmacy.

Sixty-five ADCs were optimized using reports identifying the most common medications dispensed to individual patient care units over an eight-week period. Total interventions included 1,132 medication additions, 262 deletions, and 167 par adjustments. Overall cabinet product inventory increased, while cabinet cost was decreased. When comparing to an eight-week post-intervention period, dispenses from central pharmacy decreased 13% and re-dispenses from Central Pharmacy decreased 4%. These decreases are particularly impressive given the context of multiple drug shortages for items usually available on ADCs.
“The NICU Pharmacy Team plays an integral part in the care that is delivered to our patients every day. They share their knowledge and expertise in the area of Neonatal and Pediatric pharmacology which contributes greatly to the survival and safe care of our patients. The NICU is very fortunate to have this incredible resource.”

- Suzanne Fernandes, R.N., MSN; Nurse Director Special Care Nursery

**Neonatal Pharmacy Committee Accomplishments**

- 49 DAG updates
- 1 new DAG
- 23 guideline updates
- 1 new parent information sheet

**Pharmacist-led RSV Prophylaxis Stewardship Program**

- Non-qualifiers screened: 247
- Qualifiers per AAP guidelines: 35
  - Doses given: 13
  - Transferred from OSH: 8
  - Season ended prior to discharge: 12
  - Not ordered mistakenly before discharge (team followed up w/ PCP): 2
- Non-AAP qualifiers given doses as exceptions approved by medical directors: 6

**Other Accomplishments**

- Contribution to 4 NICU Clinical Practice Guidelines
- Continuation of the pharmacy consultant role for the Neonatal Fetal Care Clinic in the BWH Center for Maternal-Fetal Medicine, with development of 5 new pregnancy and lactation medication counseling sheets
- Ongoing Epic improvements with 40 tickets entered for the NICU
- Increased NICU pharmacist education with bimonthly 3pm presentations
- Successful move into the new NICU Neighborhood 4 and the Growth and Development Unit in April 2017 with completion of Phase 2 of the NICU renovation project
Hematology / Oncology

“Without our Hem/Onc pharmacists, we could not function safely as we provide care for some of the most vulnerable patients. We are grateful for their leadership, mentoring, and constant support when it comes to providing care for the oncology patients. Our interdisciplinary collaboration is exceptional too none.”

-Michelle Renard, R.N. Program Director Hem/Onc

- 2,100 chemotherapy preparations per month
- Approximately 25,100 chemotherapy preparations per year
- 509 annual hematopoietic stem cell transplants
  - 226 autologous
  - 283 allogeneic

“Pharmacy does a good job communicating to the evening and night nurses when there is an off-schedule dose of chemotherapy as this can often be easily missed.”

- Sinead Bolze, 7D R.N.

Pictured here (left to right): Dan Voit, Karen Naples Donnell, Anne McDonnell, Michelle An, Brittany Kotarski, Mary Nauffal, Dan Sullivan, Jorge Delgado-Flores
Operating Room Pharmacy

The OR pharmacy provides pharmaceutical services for surgical cases performed within 45 OR rooms. This includes dispensing medications at the OR Pharmacy window, providing drug information, reviewing medication orders, restocking of OR Omnicells, dispensing medication kits for Nursing and Anesthesia, using KitCheck for accurate restocking of kits, handling of controlled substances, reviewing discrepancies for resolution, auditing of OR and procedural area cases, and preparing sterile preparations.

- Established review of Orthopedic, Plastic and Burn cases to better assess patient needs for tranexamic acid and various tumescent preparations.

- Performed drug use evaluation of sugammadex.

- Converted pharmaceutical waste bins for controlled substances from the Cactus Smart Sinks to Stericycle CsRX bins. Once waste is placed into the bin, the bin has chemicals that deactivate the controlled substances, rendering the controlled substance irretrievable.

- New shelving for medication storage installed within the OR Pharmacy and inventory subsequently reorganized to reduce multiple storage locations, reduce overall inventory levels and improve the overall flow for distribution via the OR Pharmacy window. And clutter has been reduced as well!

Discrepancies Identified: 1402
Discrepancies Resolved: 1396
Discrepancies Reported: 6
All discrepancies have been resolved or reported since 7/31/2015
• A new OR Omnicell restocking process was implemented. Each day, the Omnicells are restocked 100% with needed medications and the counts on the Omnicells are corrected for accuracy.

• All OR discrepancies continue to be either resolved or reported. 100% of all discrepancies have documented follow-up!

• The OR Pharmacy continues to perform daily audits on controlled substances handled for most cases. The OR Pharmacy contacts physicians regarding any identified variances. In the next year, the OR Pharmacy will implement an auto-auditing process for OR cases!

• Monthly dashboards track key volume indicators and case statistics. Each month Anesthesia and Pharmacy meet to review for trends for any potential diversion. Follow-up is performed with those physicians most often identified with issues with documentation and Omnicell use.

Total cases OR/Procedural Area cases: 31,298
Cases audited OR/ Procedural Area: 20,265
Variance identified: 1433
Undocumented PCR (part of Cases audited in OR): 1840
Waste transactions: 83,856
Sterile Products Room

Renovations

The sterile products room, or SPR, has been undergoing a transformation to comply with new USP 797 and Massachusetts Board of Pharmacy requirements. At the end of 2017, construction is in the final phase III and slated for completion at the end of 2018. A brand new SPR is being constructed to include a larger anteroom, clean room, and preparation room. Additionally, a dedicated pass through window and new HEPA filters will help to reduce contamination and particle counts. New floors, stainless steel cabinets, and windows will all provide an easy to clean environment for safer compounding of sterile products. The current practice of continuous monitoring for temperature, pressure, humidity, and particle counts; which provide live information, will be integrated into the newly renovated SPR.

In addition to the SPR, a new nonsterile negative pressure room has been made to comply with USP 800 and Massachusetts Board of Pharmacy requirements. The biosafety cabinet within the room can be used to safely prepare nonhazardous and hazardous nonsterile preparations.

Changes to Workflow

As the SPR is being renovated, a temporary SPR is being used until completion. The temporary clean room has fully taken over compounding utilizing four installed biosafety cabinets. A revised staffing and manufacturing schedule has been implemented to accommodate the high volume of BWH preparations. The same rigorous sterile product requirements are applied and live continuous environmental monitoring will alarm for any excursions. To decrease contaminates and particle counts, the department has upgraded to new jumpsuits and full head covers to be incorporated into garbing procedures. Our pharmacy staff has been able to create a smooth transition to this new room while ensuring patient safety is a top priority.

TPN Pharmacist

TPN (total parental nutrition) pharmacists continue to be an invaluable member of the patient care team. The TPN pharmacist reviews and evaluates TPN admixtures for optimal therapy while working closely with dietitians, NICU pharmacists, and IV nurses. Patients have customized formulations that are individualized for a variety of different disease states. The composition of these TPNs are evaluated for correct dosages of macro and micro nutrients, interactions within the TPN bag, and cycling of the infusion.
Investigational Drug Services

IDS Metrics for FY2017

- Active DFCI based protocols: 53
- Active BWH based protocols: 247
  - New enrollments: 1278
  - New protocols (BWH only): 111
- Outpatient dispenses: 2335
- Outpatient dispense units: 56726
- New protocol compound recipes: 72
  - Protocol compound preps: 206
  - Protocol compound units: 23240
  - Protocol visits: 396
- Standard dispenses: 4582
- Standard setups: 428
- New drug packages built into epic: 120
- New investigational drug protocol order set in epic: 7
- Investigational drug protocol order sets modified: 9

IDSIS Updates

- Bug fixes: 28 tickets closed
- Enhancements: 35 tickets closed
  - BWH manual protocol creation to accommodate central IRB workflow
  - Dispense and inventory label optimization
  - Kit inventory functionality
  - Delivery queue

New omnicells installed on 9A and 9B
Streamline IDS workflows and billing for ancillary meds used in research studies

IDS has teamed up with the Translational Accelerator to help design and implement new pilot and phase 1 research at BWH

Policy and Procedure Updates:

- New handling and cleaning procedures for viral vector research
- Temp excursion reporting procedure
- Receiving procedure
- Controlled substance counting policy
Non-sterile compounding changes:
Items outsourced to **Edge Pharmacy Services**

<table>
<thead>
<tr>
<th>Compound</th>
<th>BWH product BUD</th>
<th>Edge product BUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroacetic acid</td>
<td>30 days Room Temp</td>
<td>90 days Room Temp</td>
</tr>
<tr>
<td>Dibutyl squaric acid</td>
<td>30 days Room Temp</td>
<td>60 days Refrigerated</td>
</tr>
<tr>
<td>Vitamin K oral solution</td>
<td>3 days Refrigerated</td>
<td>90 days Room Temp</td>
</tr>
<tr>
<td>Cantharidin</td>
<td>30 days Room Temp</td>
<td>180 days Room Temp</td>
</tr>
</tbody>
</table>

New advanced prep report:
BWH Rx Find Investigational Medications Starting Today thru Tomorrow aka
**“TNT report”**

Dialogue EDU Training:
Off-hour dispensing training modules: 6
General protocol training: 2
CNR compounding training: 1
Committees

- Ambulatory Therapy Plan Committee
- Ambulatory/TOC Task Force
- Anticoagulation Leadership Committee
- Anticoagulation Task Force Committee
- Antimicrobial Subcommittee
- ASHP Section of Clinical Specialists and Scientists: Programming Committee
- Bariatric Pharmacy Consult
- Beacon Enterprise Multidisciplinary (Reporting Workgroup)
- BH DQS IS Oversight Committee Agenda
- BWH Emergency Management Committee
- BWH Fall Prevention Committee
- BWH Forms Committee
- BWH/DFCI Oncology Inpatient Medication Event Committee
- Care Improvement Council
- Chronic Pain Committee
- Communications Committee
- Controlled Substance Management Oversight
- DF / BWCC ID Pharmacy / Nursing Committee
- DFCI Residency Advisory Committee, PGY2
- DFCI Willow Core Team
- Diabetes Subcommittee
- Drug Administration Guideline Committee
- Drug Safety Committee
- Emergency Medicine Quality Committee
- Emergency Response Committee
- FK Partners Steering Committee
- FK Partners Working Group
- Human Research Committee IRB
  - ICU Committee
  - IDSIS Workgroup
- Infectious Disease Committee
- Inpatient Oncology Service Line
- Investigational Pharmacy Change Control Board
  - Ivent Working Group
- Joint Commission Leadership Committee
- Joint Commission Readiness Committee
- Kudos Committee
- Laboratory Stewardship Committee
- M&M and Process Improvement Committee
  - Med Safety Report
- Medical Staff Executive Committee (MSEC)
- Medicine Cabinet Newsletter Committee
  - Needle Safety Committee
- Neonatal Pharmacy Committee
- NICHE Steering Committee
- NICU Safety Event Committee
  - Nutrition Committee
- Oncology Oversight Committee
- Oncology Service Line - Drug Standardization
- Oncology Service Line - Protocol Management
- Oncology Service Line - Steering Committee
- P&T Newsletter Committee
- Pain and Sedation Steering Committee
- Partners Critical Care Collaborative
- Partners MDRO/AMS Committee
- Partners Pharmacy and Therapeutics - Oncology Subcommittee
- Partners Pharmacy Executive Committee
  - Partners Sepsis Task Force
  - Partners Trauma Expert Panel
  - Peer Review Committee
  - Perioperative Safety Committee
- Pharmacy and Therapeutics Committee (BWH)
- Pharmacy and Therapeutics Committee (Dan-Farber)
- Pharmacy and Therapeutics Committee (Faulkner)
- Pharmacy and Therapeutics Committee (Partners)
- Pharmacy Change Control Board
- Pharmacy Credentialing Committee
- PPTC Cardiology Subcommittee
- Procedural Safety Committee
- Professional Development Committee/ACPE Committee
- Radiation Safety Committee
- Rapid Cycle Process Improvement Committee
  - Research Workgroup
- Residency Advisory Committee
- Partners Pump Standardization Committee
- Smart Infusion Pump Committee
- Theradoc Steering Committee (Pharmacy)
- Therapeutic Hypothermia Task Force

44 Brigham and Women’s Department of Pharmacy
**Rapid Cycle Process Improvement Committee.** Pictured here (left to right): James Gilmore, Megan Rocchio, Chris Hughes, Ron Romard, Heather Dell’Orfano, Caryn Belisle, Eleanor Broadbent, Sarah Culbreth

**Communications Committee.** Pictured here (left to right): Kevin Anger, Ken Lupi, Rhynn Malloy, James Gilmore, Bryan Cook, Mike Schontz, Megan Rocchio

**3pm Pharmacist Meeting.** Pictured here (left to right): Christina Palazzo, Mark Dalimonte, Bryan Cook, Ken Lupi, Kaitlin Crowley, Sara Alosaimy, Jeremy Delgado, Anne McDonnell, Kevin Dube, Mary Kovacevic, Patty Krause
Pharmacy Quality and Safety
Drug shortages, changes in the regulatory requirements, and discontinued products are just some of the reasons why the BWH pharmacy department must engage with outside compounding facilities.

This past year, our assessment team comprised of Keely Kwok and Caryn Belisle set off to visit (2) 503b compounding pharmacy facilities. They visited the Quva Pharmacy facilities, one in Temple, TX and the other in Sugarland, TX; then they headed up north to Burlington, VT to visit Edge Pharmacy. The team performed a 1-day site visit/audit to observe their operations and review documentation. They followed up with a summary report with outlined observations, recommendations, and best practices. Quva and Edge Pharmacies submitted responses to the recommendations and observations met the assessment team’s expectations, and both pharmacies are now approved vendors of the BWH pharmacy department.

**QUVA product list:**
- Vancomycin 1.25 gm and 1.5 gm infusion bags
- Hydromorphone 2 mg syringes
- Calcium Gluconate infusion bag
- Oxytocin infusion bags

**EDGE Pharmacy Services product list:**
- Dibutyl squaric acid
- Trichloroacetic acid
- Cantharidin
- Buffered Lidocaine
- Vitamin K solution
Safety Monitoring

Clinical Pharmacist Interventions FY17

TheraDoc™ Alerts Reviewed = 59,881

Epic iVents Created = 56,130

Total Clinical Interventions = 116,001
Medication Safety Initiatives

Morbidity Mortality and Process Improvement Rounds
8 cases were presented during 7 different rounds
4 lead to guideline updates
6 lead to operational changes
3 lead to Pharmacy and Therapeutic Committee changes
2 lead to smart pump changes
95 percent of pharmacists responding to a survey reported that the Morbidity and Mortality and Process Improvement rounds have positively impacted the way they practice pharmacy

Executive Pharmacy Quality and Safety Walkrounds
Total Number of Action Items Completed= 46

![Number of Action Items](chart.png)

Annual Report FY17 49
Total Medication Safety Reports reviewed = 1673

The top 3 process involved in medication safety reports were:
- Administering
- Dispensing
- Ordering/Prescribing

The majority of medication safety reports actual severity were categorized as:
0 - Near Miss, Did Not Reach the Patient
1 - No Harm, Did Reach the Patient
Audit Work

The Department of Pharmacy instituted a new program to monitor hospital-wide controlled substance transactions and potential diversions in 2016.

The team is made up of four certified pharmacy technicians. Controlled Substance Diversion auditors provide the necessary resources for insuring full regulatory compliance with all federal, state, and Joint Commission standards for controlled substance diversion compliance and monitoring.

<table>
<thead>
<tr>
<th>The Pharmacy Technician Auditors are responsible for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Daily reconciliation, adjudication and documentation of all Omnicell Discrepancies</td>
</tr>
<tr>
<td>· Daily analysis, adjudication and documentation of Omnicell transactions for daily average drug diversion index by user</td>
</tr>
<tr>
<td>· Daily audits and documentation of all operation room and procedural area post case reconciliations</td>
</tr>
</tbody>
</table>

Pictured here (left to right:) Pam Ohannesian CPhT, Diego Delgado CPhT, Patricia Gillis CPhT and Gail Dubios CPhT
New Initiatives

Penicillin / Cephalosporin Test Dose Pathway

Microbiology Laboratory Stewardship Group

The Joint Commission Standards (new 2017!)

New Policies / Updated Guidelines

TPN Line Infection Management Guidelines
  Partners-Wide Sepsis Guidelines
  Pneumonia Treatment Guidelines
  Clostridium difficile Infection Guidelines
  Antibiotic Renal Dose Adjustment Guidelines

New Formulary Additions
  Dalbavancin
  Oritavancin
  Isavuconazonium
  Ceftolozane/tazobactam
  Ceftazidime/avibactam
  Tedizolid
**Prospective Daily Audit with Intervention and Feedback for FY’17**

- **608** Interventions to optimize therapy based on drug susceptibilities
- **189** Reviews of potential opportunities for stopping vancomycin
- **180** Interventions to address redundant therapy (Staph, beta-lactam, anti-fungal, anaerobic)
- **79** Interventions to tailor poly-antibacterial therapy
Education and Outreach
Pharmacy Students

187 Pharmacy Students

20 IPPE Students

> 50 faculty and adjunct faculty preceptors

167 APPE Students

5 colleges of pharmacy

IPPE students (20):
Massachusetts College of Pharmacy & Health Sciences (13)
Massachusetts College of Pharmacy & Health Sciences Worcester and Manchester Campuses (5)
Saint Joseph’s School of Pharmacy (1)
University of South Carolina (1)

APPE students (167):
University of South Carolina (1)
University of Connecticut (1)
Northeastern University (53)
Massachusetts College of Pharmacy & Health Sciences (112)
Stephanie Sibicky, PharmD, BCGP, BCPS

Assistant Clinical Professor
Department of Pharmacy and Health Systems Sciences
Northeastern University | School of Pharmacy

Clinical Pharmacy Faculty - Integrated Teaching Unit
Brigham and Women's Hospital

**Services / Responsibilities / Projects:** We provide clinical services including rounding, drug information, medication reconciliation, and discharge counseling on Intensive Teaching Unit (ITU) - A (10A/B), attendance to medical grand rounds, and daily care coordination meetings

**Number of students precepted:** 17

“Dr. Sibicky is approachable and dedicated to the professional development of her students throughout the entire rotation. She is proactive in learning more about the career interest of her students and tailoring specific aspects of the rotation to their interest whenever possible. She strongly encourage her student’s effort in self-directed learning to help promote a habit of continuous learning. She provides consistent constructive feedback throughout the rotation to help her students improve which is beneficial.”

Brandon Dionne, PharmD, BCPS, AAHIVP

Assistant Clinical Professor
Department of Pharmacy and Health Systems Sciences
Northeastern University | School of Pharmacy

Clinical Pharmacy Faculty - Infectious Disease Consult Service and Antimicrobial Stewardship Program
Brigham and Women's Hospital

**Number of students / residents precepted:** 2 residents and 10 students

Read about what Dr. Paul Sax, MD has to say about Brandon’s contributions to the field of infectious diseases:

**Celebrating the Invaluable Knowledge and Expertise of ID Specialist PharmD’s**


“Dr. Dionne was very willing to take time to teach and explain infectious diseases topics. Topic discussions were very valuable, as was time spent discussing Antimicrobial Stewardship patient care cases. The team values his opinion and I appreciated the opportunity to see how clinical pharmacists interact with the team in order to provide recommendations.”
“The pharmacy students have been an integral part of multiple projects here at the Center for Patient Safety Research and Practice. At each meeting they contribute, ask questions, or just keep us on our toes as we try to explain and plan our work. They are a most welcome and valuable part of our work here and our team”.

- Dr. Gordon Schiff, MD, Division of General Internal Medicine
Pharmacy Residency Program

PGY1 Residents (7)

From left to right: Megan Duper-reault; Emad Alsarraf; Muneerah Aleissa; Eleanor Broadbent; Melanie Goodberlet; Abdulrahman Alshaya; Julie Kelly

Quick Facts
- ASHP Accredited program
- > 50 resident preceptors
- Opportunities to precept and co-precept students
- Each resident presents 2 CE programs and countless other presentations
- New this year - Residents develop management skills by working as Pharmacist in Charge on the weekends

Critical Care (at least 1):
- Medical
- Surgical
- Burn/Trauma
- Thoracic
- Neuro

Cardiology (at least 1):
- Cardiac ICU
- Cardiac Surgical ICU
- General Cardiology
- Heart Failure

Ambulatory Care (2):
- Anticoagulation Management Services
- Pain Management
- Primary Care
- General Medicine
- Infectious Disease
- Pharmacy Hospital Administration / Leadership

Abdominal Transplant
Heart Transplant
Lung Transplant
Bone Marrow Transplant
Emergency Medicine
Hematology / Oncology
Investigational Drug Service
Neonatal ICU

Elective Rotations

Aminoglycoside Stewardship
Committee Involvement
MCPHS Teaching Certificate
Pharmacy Staffing
Research Project

Longitudinal Activities
PGY2 Residents (7)

Critical Care Residents (4)

Kaitlin Crowley, PharmD, BCPS
Robert Dannemiller, PharmD, BCPS
Kevin McLaughlin, PharmD, BCPS
Natasha Romero, PharmD, BCPS

The PGY2 critical care residency provides advanced training in the areas of critical care pharmacotherapy and research. The residents gain extensive experience in all the specialized critical care areas throughout BWH, including medicine, surgery, neurology, cardiology, emergency medicine, and a variety of elective rotations.

Cardiology Residents (1)

Megan Marsh, PharmD

The cardiology resident has opportunities to develop clinical expertise in general, acute care, and ambulatory care cardiovascular medicine. Additional opportunities are available in advancing cardiovascular research, along with precepting and educating students and PGY1 residents.

Infectious Disease Residents (2)

Sara Alosaimy, PharmD
Khalid Bin Saleh, PharmD

The infectious disease resident has opportunities to develop clinical expertise in infectious diseases pharmacotherapy through participation in the antimicrobial stewardship program and clinical activities with the infectious disease consult service. In addition to participating in outpatient HIV clinics, microbiology lab and infection control processes.
PGY1 Program Directors: From left to right Katelyn Sylvester, PharmD, BCPS; Megan Rocchio, PharmD, BCPS; Sarah Culbreth, PharmD, BCPS
The professional development committee in conjunction with the ACPE committee had another busy and productive year in 2017. A total of 58 ACPE accredited continuing education activities were built and provided in-house. Of those, 35 activities were live and 23 activities were home-study. New to 2017 was the addition of the Pharmacy Morbidity and Mortality Safety Rounds of which there were 6 presentations. Over 1500 CE evaluations were completed by participants to claim their CE credit. In addition to accredited CEs, there were 43 non-accredited educational courses built in dialogedu for pharmacist and technician training. The annual needs assessment survey was performed which provided guidance on topic areas that require more staff education. This information is important to the committee for planning and building education modules to support the staff. Recently, Pamela Ohannesian officially joined our committee as a much-needed representative and advocate for professional development of our already amazing pharmacy technicians. Pam has worked extremely hard and was successful in helping our department receive the designation of Advocate Employer for the PTCB. Ultimately, this will encourage our technician staff to become certified and empower them in their daily work.
In 2017, Operation Walk Boston celebrated its tenth year in the Dominican Republic. Together, with former patients and colleagues from the Dominican Republic, Operation Walk Boston celebrated 10 successful years of joint replacements surgeries in over 400 patients.

What is Operation Walk?

Operation Walk Boston is a multidisciplinary group of healthcare professionals who volunteer to travel to Santo Domingo, Dominican Republic to provide hip and knee replacements for people in need.

How are BWH pharmacists involved?
The Operation Walk Boston pharmacists work with the team leadership to order, pack, and deliver medications to patients during the medical mission.
Anne McDonnell picking up medications and supplies for the 2017 Operation Walk trip

Dr. Thornhill and members of the Operation Walk team in the Dominican Republic

10-year celebration of Operation Walk
Awards and Honors

Paul Szumita has been designated as a Fellow of the American Society of Health Systems Pharmacists (ASHP). As a fellow of ASHP, Paul has been recognized for his outstanding contributions to the field of health-system pharmacy practice. Members who have achieved FASHP status have successfully demonstrated sustained commitment or contributions to excellence in pharmacy practice for at least 10 years, contributed to the total body of knowledge in the field, demonstrated active involvement and leadership in ASHP, and have been actively involved in and committed to educating practitioners and others.

Paul Szumita was also awarded the MSHP Practitioner Excellence Award for 2017, and Adrian Wong received the 2017 MSHP Pharmacy Resident/Fellow Research Project Award.

Anticoagulation Management Services (AMS) was recognized as a Center of Excellence for another 2 years.

Angela Triggs, Mike Cotugno, and Caryn Belisle received a Partners in Excellence Team Award in 2017 for their work on the Partners Drug Diversion Assessment Team. The Partners in Excellence Awards are given annually in recognition of outstanding performance and commitment to excellence.

Mike Cotugno and Roman Belenkiy were honored for “The Brigham Way” in February 2017 when they went above and beyond to help a patient in need. A patient who was newly diagnosed with cancer was struggling to find where she could receive the Zostavax vaccine that she was told she needed prior to a scheduled surgery. Even though the Zostavax clinic was not scheduled for that day, Mike and Roman brought the patient to the outpatient pharmacy and administered the vaccine to her.


Dec 2016


Dec 2016


Jan 2017


Jan 2017


Feb 2017

Mar 2017
Alsulaiman D, Kubiat DW. Criteria for sepsis: systemic inflammatory response syndrome (SIRS) and quick sepsis-related organ dysfunction assessment (QSOFA). Current Emergency and Hospital Medicine Reports. 2017 Mar; DOI: 10.1007/s40138-017-0125-6.
**Apr 2017**


**May 2017**


**June 2017**


**July 2017**


**Aug 2017**


**Sept 2017**

Posters and Presentations Appendix

As a department, we have presented 19 posters, 22 platform presentations, and 27 ACPE accredited CE’s this past fiscal year

Posters


Ahlam Alghamdi PharmD; Stephanie Sibicky PharmD, BCPS, CGP. Development and impact of a pharmacy student-led transitions of care service on an adult general medicine service. ASHP Midyear. Dec 2016. Las Vegas NV.


Kevin McLaughlin, Jessica Rimsans, Katelyn Sylvester, David Dorfman, Patricia Senna, Samuel Goldhaber. Evaluation of Anti-Xa and aPTT Values In Surgical and Medical ICU Patients On Continuous Infusion Unfractionated Heparin Therapy. ASHP Midyear. Dec 2016. Las Vegas NV.

Natasha Romero, PharmD; Kenneth Lupi, PharmD, BCPS; Danielle Carter, PharmD, BCPS, CACP; Rhynn Malloy, PharmD BCPS. Double versus triple therapy with direct oral antithrombotics. ASHP Midyear. Dec 2016. Las Vegas NV.

Mary Kovacevic, Paul Szumita, Kevin Dube, Jeremy DeGrado. Transition from continuous infusion fentanyl to hydromorphone in critically ill patients. ASHP Midyear. Dec 2016. Las Vegas NV.


Megan N. Rhoten, PharmD; Rhynn Malloy, PharmD; Craig A. Stevens, PharmD; Lina Matta, PharmD, MPH; Lynne Stevenson, MD; Kathryn A. Britton, MD; Akshay S. Desai, MD, MPH. Evaluating Risk Factors for Postoperative Cardiac Surgery Readmissions at a Large Tertiary Academic Medical Center. American College of Cardiology – ACCP. Mar 2017. Washington, D.C.

Rhynn Malloy, PharmD BCPS; Matthew Silva, PharmD; Tiffany Ip, PharmD BCPS; Danielle Honein, PharmD BCPS; Jennifer Donovan PharmD; Milka Njoroge, PharmD BCPS AQ-Cardiology. Evaluation of anti-anginal agents for the symptomatic treatment of chronic stable angina using mixed treatment comparison meta-analysis. ACC.17 Scientific Sessions. Mar 2017. Washington, D.C.
Jessica Rimsans, PharmD, BCPS; Megan Barra, PharmD, BCPS; Hisham Badreldin, PharmD, BCPS; Julie Lauffenburger PharmD, PhD; Jean M. Connors, MD. Evaluation of Increased Incidence of Heparin Induced Thrombocytopenia at a Large Academic Teaching Hospital. International Society of Thrombosis and Hemostasis (ISTH) 2017 Congress. Jun 2017. Berlin, Germany.

Megan N. Rhoten, PharmD; Rhynn Malloy, PharmD; Craig A. Stevens, PharmD; Lina Matta, PharmD, MPH; Lynne Stevenson, MD; Kathryn A. Britton, MD; Akshay S. Desai, MD, MPH. Contribution of Heart Failure to Readmissions Following Non- Emergent Cardiac Surgery. Heart Failure Society of America. Sep 2017. Dallas, TX.

Kaitlin E. Crowley, PharmD; Amy Billodeau, PharmD, BCACP; Alev Atalay, MD; Rose Kakoz, MD, MPH. Urine toxicology screening in patients with chronic opioid use: An attempt to curb opiate abuse in a primary care practice. Society of General Internal Medicine, Washington, D.C.


Platform Presentations

Bill Churchill. Welcome and Opening Comments. ASHP Midyear. Dec 2016. Las Vegas NV.


Michele Matthews. Chronic Opioid Therapy for Patients with Substance Use Disorder: Between the Devil and the Deep Blue Sea. ASHP Midyear. Dec 2016. Las Vegas NV.

Mary Amato. Incorporating Medication Indications into the Prescribing Process. ASHP Midyear. Dec 2016. Las Vegas NV.

Kevin Anger. Pharmacotherapy Considerations in Patients on Extracorporeal Membrane Oxygenation. ASHP Midyear. Dec 2016. Las Vegas NV.


Michele Matthews. On a Scale of 0 to 10, How Scared Are You? Taking the Fear out of Chronic Pain Management. ASHP Midyear. Dec 2016. Las Vegas NV.


Continuing Education

Gail Dubois. Monitoring of Controlled Substances at Brigham and Women’s Hospital. 12/12/2016.
Megan Barra. Pharmacologic Management of Status Epilepticus from the ED to the ICU. 12/13/2016.
Hisham Badreldin. Diabetes Drugs Gain Footing in Cardiology. 02/28/2017.
Megan Rhoten. Improving Outcomes in Heart Failure. One Beat at a Time. 03/02/2018.
Ahlam Alghamdi. Role of Octreotide in Sulfonylurea-Induced Hypoglycemia. 03/29/2017.
Lindsay Urben, Patty Krause. Pharmacist’s Role in the Treatment of Stroke: 2017 Update. 05/03/2017.
Kevin McLaughlin, James Gilmore. Patient Controlled Analgesia Case and Partners eCare Standardization. 05/08/2017.
Natasha Romero. An overview of Valvular Heart Disease and Valve Thrombosis. 05/23/2017.
Judy Cheng. Approaches to Arrhythmia Management: Focus on Antiarrhythmics. 06/20/2017.
Megan Rocchio. Improving the Quality of Sterile Product Compounding: Robotics, Quality Assurance, and Best Practices. 09/14/2017.
22-27. All platform presentations done at the Eastern States Conference were also created into continuing education modules.
STRATEGIC PLAN
FOR FISCAL YEAR 2018
**Pharmacy Informatics and Technology**

**Goal:** Support PeC with Epic and other pharmacy information systems by working across PHS institutions to improve efficiency and control costs

**Business and Finance**

**Goal:** Maximize personnel resources to ensure the department continues to control costs for wages and salaries

**Goal:** Develop a process improvement plan to enhance pharmacy inventory management to improve efficiency and control costs

**Goal:** Align BWH pharmaceutical costs and operations across the PHS network

**Operations and Clinical Services**

**Goal:** Evaluate and restructure the department’s organization, workflow, and clinical duties to enhance employee productivity while supporting safe and optimal clinical care to our patients.

**Human Resources and Staff Development**

**Goal:** Enhance pharmacy employee satisfaction, maximize employee retention, and promote team building across the department to support the growth of our business

**Goal:** Evaluate the status of on-boarding pharmacy interns and students to support the teaching and development of both local and international pharmacy communities

**Regulatory Compliance, Quality, and Safety**

**Goal:** Ensure all staff meet the state, institution, and departmental regulatory requirements for licensure, credentialing, and competency trainings to support patient care

**Goal:** Determine departmental needs to comply with new state and federal regulatory requirements working across departments to support patient care

**Goal:** Understand and communicate important departmental quality metrics to support patient care and improve overall efficiency
Acknowledgements

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