

2018

PHARMACY SERVICES
ANNUAL REPORT 2018



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GREETINGS FROM THE ADMINISTRATOR

When you imagine exceptional health care, the first thing you think about is the quality of that care. Pharmacy Services is one of the key drivers that has made Lehigh Valley Health Network the region's premier provider of high-quality care for decades.

Our skilled, dedicated and compassionate team of over 397 colleagues continues to innovate, providing the highest level of pharmacy services to our patients through outstanding clinical services, and a distribution model that provides safety and efficiencies like no other. This report outlines the accomplishments made by Pharmacy Services in fiscal year 2018 as we further our mission to "heal, comfort and care for the people of our community."



This fiscal year we successfully converted our wholesaler from Amerisource to Cardinal, helping our network save \$16 million dollars over the next four years. We have started a significant expansion of our 340B drug-pricing programs, which also will generate significant savings for our network.

Safety and quality performance across all sites continue to shine as we administered 10,096,491 doses, and our network harmful error rate was 4 errors per million doses. We provided clinical interventions on 105,405 orders, resulting in safer care and cost reductions of more than \$800,000. Our retail, infusion and specialty pharmacy divisions continue to grow financially while providing high-quality patient care and customer service. In fiscal year 2018, those divisions generated over \$7.5 million in operating income. Additionally, our alignment with Lehigh Valley Health Network's Health Plan generated \$3.2 million in savings.

I am honored to be part of such an exceptional team and am looking forward to another exciting year ahead.

Best Regards,
Brian D. Lenich, RPh
Administrator, Pharmacy Services

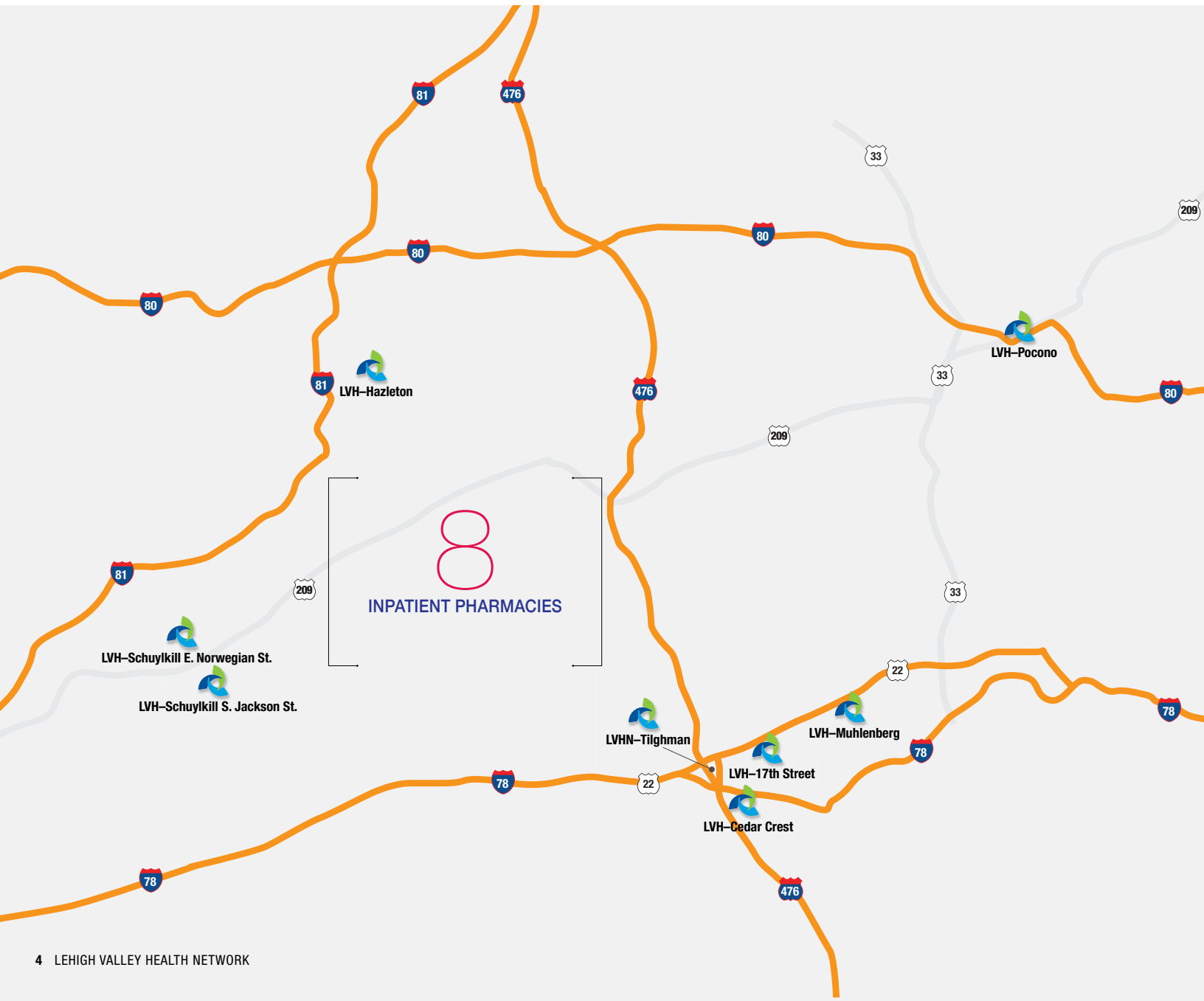
LVHN INPATIENT PHARMACY SERVICES

INPATIENT PHARMACIES - ONE AT EACH OF OUR EIGHT HOSPITAL LOCATIONS

- 3** in Allentown, Pa.
- ▶ LVH–Cedar Crest
 - ▶ LVH–17th Street
 - ▶ LVHN–Tilghman
- 1** in Bethlehem, Pa.
- ▶ LVH–Muhlenberg

- 1** in East Stroudsburg, Pa.
- ▶ LVH–Pocono
- 1** in Hazleton, Pa.
- ▶ LVH–Hazleton

- 2** in Pottsville, Pa.
- ▶ LVH–Schuylkill E. Norwegian St.
 - ▶ LVH–Schuylkill S. Jackson St.



LVHN HOSPITAL LOCATIONS

Lehigh Valley Hospital license includes LVH–Cedar Crest, LVH–17th Street, LVH–Muhlenberg and LVHN–Tilghman.

LVH–Cedar Crest is ranked among the top 5 hospitals in Pennsylvania as noted in U.S. News & World Report’s Best Hospitals. These campuses serve communities in Lehigh, Northampton, Berks and Bucks counties in eastern Pennsylvania.

Beds: 1,185

LVH-CEDAR CREST

- ▶ Level I Trauma Center
- ▶ Comprehensive Stroke Center
- ▶ Children’s ER
- ▶ Family Birth and Newborn Center
- ▶ Level IV NICU
- ▶ Regional Burn Center
- ▶ John and Dorothy Morgan Cancer Center

LVH-MUHLENBERG

- ▶ Behavioral Health
- ▶ Primary Stroke Center
- ▶ Family Birth and Newborn Center
- ▶ Level II NICU
- ▶ Cancer Center at Lehigh Valley Hospital–Muhlenberg

LVH-17TH STREET

- ▶ Community clinics
- ▶ Breast Health Services
- ▶ Sleep Disorders Center

LVHN-TILGHMAN

- ▶ Center for Orthopedic Medicine
- ▶ ExpressCARE
- ▶ LVHN Surgery Center–Tilghman

LVH-HAZLETON

The former Greater Hazleton Health Alliance merged with Lehigh Valley Health Network (LVHN) in 2014.

LVH–Hazleton serves communities in the Greater Hazleton area.

Beds: 150

- ▶ Level IV Trauma Center
- ▶ Gunderson Rehabilitation Center
- ▶ Primary Stroke Center
- ▶ Family Birth and Newborn Center
- ▶ LVHN Cancer Center–Hazleton

LVH-SCHUYLKILL

The former Schuylkill Health System merged with LVHN in 2016. LVH–Schuylkill serves Pottsville and surrounding communities in Schuylkill County.

Beds: 189

- ▶ Stine Acute Rehabilitation
- ▶ Advanced Wound Center
- ▶ Behavioral Health Services (senior, adult, adolescent)
- ▶ Family Birth and Newborn Center
- ▶ LVHN Cancer Center–Schuylkill

LVH-POCONO

The former Pocono Health System merged with LVHN in 2017. LVH–Pocono serves communities in Monroe County and the Pocono Mountain region.

Beds: 249

- ▶ Level III Trauma Center
- ▶ ESSA Heart and Vascular Center
- ▶ Family Birth and Newborn Center
- ▶ Level III NICU
- ▶ Dale and Frances Hughes Cancer Center

FISCAL YEAR 2018 STATISTICS

INPATIENT PHARMACY DEPARTMENT VOLUME METRICS FOR LVH-CEDAR CREST, LVH-MUHLENBERG, LVH-17TH STREET, LVHN-TILGHMAN, LVH-HAZLETON, LVH-SCHUYLKILL AND LVH-POCONO

DOSES ADMINISTERED

10,096,491

ORDERS VERIFIED

3,072,408

INTERVENTIONS

105,405

HARD COST SAVINGS FROM INTERVENTIONS

\$744,116

DRUG EXPENSE

\$182,040,513

HEALTH SPECTRUM PHARMACY SERVICES FISCAL YEAR 2018

5

Health Spectrum Pharmacy Services Locations

- ▶ Health Spectrum Pharmacy Services–Cedar Crest, 1202 S. Cedar Crest Blvd., Allentown
- ▶ Health Spectrum Pharmacy Services–17th Street, 1637 Chew St., Allentown
- ▶ Health Spectrum Pharmacy Services–Muhlenberg, 2545 Schoenersville Road, Bethlehem
- ▶ Health Spectrum Pharmacy Services–Pocono, 206 E. Brown St., East Stroudsburg
- ▶ Health Spectrum Pharmacy Services–Infusion, 2024 Lehigh St., Suite 500, Allentown



FISCAL YEAR 2018 RETAIL AND SPECIALTY STATISTICS

RETAIL PHARMACY DIVISION

Health Spectrum Pharmacy Services are located at LVH–Cedar Crest, LVH–17th Street, LVH–Muhlenberg and LVH–Pocono. In addition to filling and dispensing LVHN employee prescriptions, we also dispense medication to patients being discharged from our hospitals, our clinic patients and other members of our community. Services we offer include bedside prescription delivery, compliance packaging, free convenience shipping and adult immunization administration.

TOTAL RETAIL SCRIPTS

400,179

TOTAL INFUSION PATIENTS

4,360

TOTAL REVENUE

\$76,914,094

TOTAL DRUG EXPENSE

\$62,194,099

OPERATING INCOME

\$7,534,855

SPECIALTY PHARMACY DIVISION

Our specialty pharmacy team works closely with LVHN specialists to obtain high-cost, high-touch medications for patients. Services offered by our specialty team include but are not limited to: prior authorization, appeal and financial assistance support, monthly patient compliance phone calls, on-site self-injectable teaching and compliance packaging. Our care team utilizes a care management system called TherigySTM to track patients' clinical outcomes. In FY18 we added a pharmacist and an informatics coordinator to the specialty division.

HOME INFUSION DIVISION

Health Spectrum Pharmacy Services home infusion division services patients in 13 counties in Pennsylvania and two counties in New Jersey. Therapies provided include but are not limited to: TPN, anti-infectives, chemotherapy, immunoglobulin, hemophilia factors, pain management and corticosteroids. Our team consists of pharmacists, nurses, financial coordinators, pharmacy technicians and delivery technicians, all with the goal of delivering high-quality, cost-effective services to patients in the comfort of their homes. Partnering with Lehigh Valley Home Care and other agencies, Health Spectrum's home infusion division provides the most up-to-date services and infusion devices to allow patients the freedom to continue their recovery and take charge of their care in the comfort of their homes.



CANCER/AMBULATORY INFUSION CENTERS

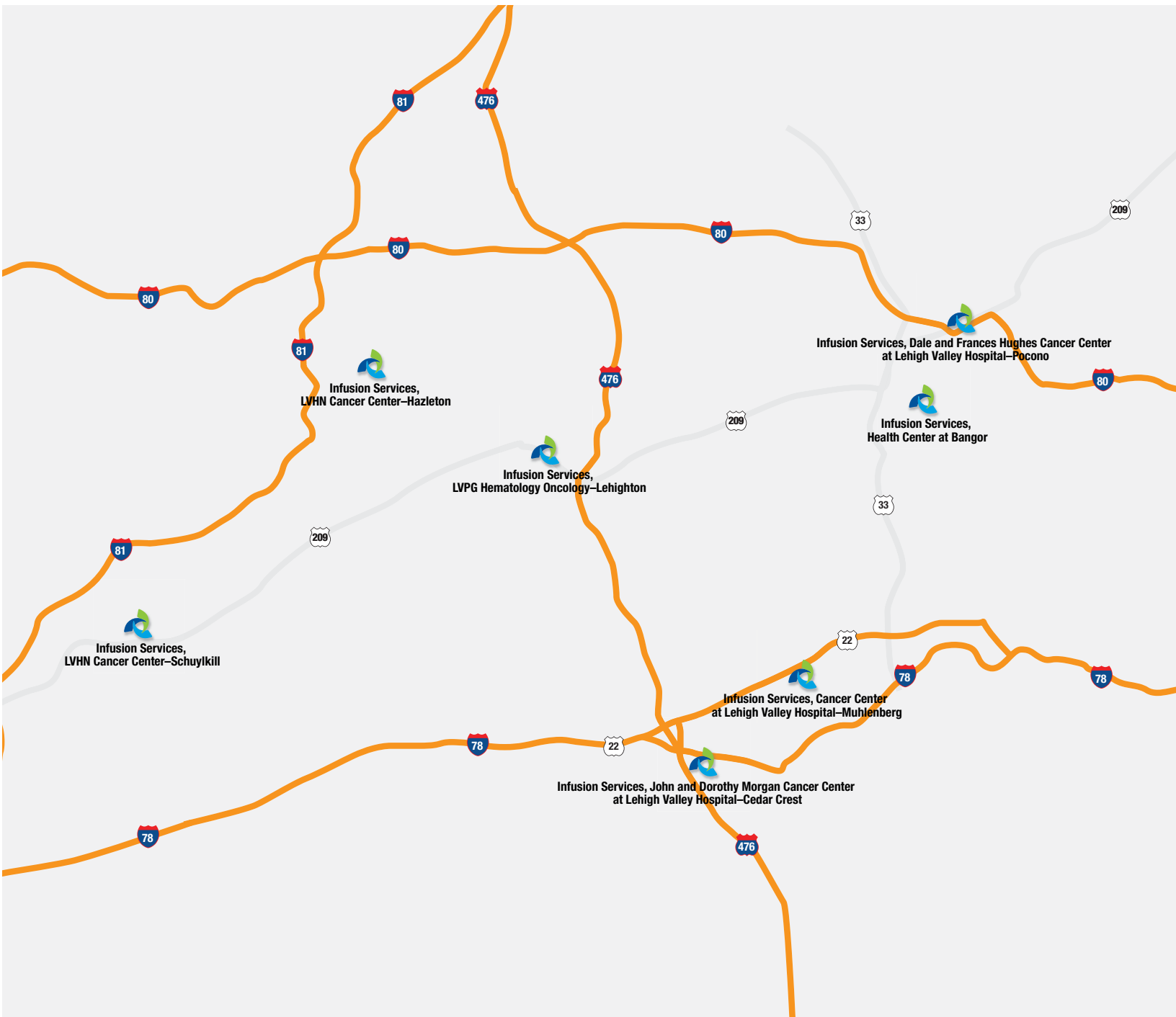
Outpatient infusion center services encompasses six locations at LVHN. The multipurpose area (MPA) pharmacy at LVH–Cedar Crest operates with four pharmacists and three technicians Monday–Friday and one pharmacist and technician on Saturday. During fiscal year 2018 (FY18), total visits for the MPA area were **28,719**. The multipurpose satellite (MPS) pharmacy at LVH–Muhlenberg operates with two pharmacists and two technicians Monday–Friday. The MPS had **13,222** total visits in FY18. The multipurpose area at Bangor (MPB) operates with one pharmacist and one technician Monday–Friday. Total MPB visits in FY18 were **2,045**, however MPB was closed for approximately two months due to flooding of the health center. In that time, patients were treated at MPS and MPA. The LVH–Hazleton cancer center is staffed by one pharmacist, and visits in FY18 were **2,127**. LVH–Pocono is staffed by two pharmacists Monday–Friday and had **9,343** visits in FY18. LVH–Schuylkill cancer center has just opened and staffs one pharmacist and one technician Monday–Friday.

Pharmacists at infusion locations review each patient’s treatment regimen for allergies, laboratory results, other diagnostic tests and medication dosings. They then make recommendations based on these factors to ensure the appropriate treatment regimen and dosing is being safely administered to patients. Pharmacists are also a vital source of drug education for both nursing and physician staffs. Each pharmacy is embedded within the infusion area, which provides opportunities for pharmacists to speak with patients for any questions about their medications. Technicians who compound medications are trained in preparation of hazardous and nonhazardous materials and utilize all necessary precautions.

The pharmacy is actively involved with the clinical trials department. In FY18, LVH–Cedar Crest and LVH–Muhlenberg had over 100 patients on various types of clinical trials. Since 2016, Lehigh Valley Cancer Institute has been a member of the Memorial Sloan Kettering (MSK) Cancer Alliance. In June 2018, MSK Alliance membership was extended to LVH–Pocono. This offers patients MSK-standards treatment close to home. Pharmacy will play an integral part in Phase I studies opening for patients this fall.

Outpatient Infusion Center Locations

- ▶ Infusion Services, John and Dorothy Morgan Cancer Center at Lehigh Valley Hospital–Cedar Crest
- ▶ Infusion Services, Cancer Center at Lehigh Valley Hospital–Muhlenberg
- ▶ Infusion Services, LVHN Cancer Center–Schuylkill
- ▶ Infusion Services, Dale and Frances Hughes Cancer Center at Lehigh Valley Hospital–Pocono
- ▶ Infusion Services, Health Center at Bangor
- ▶ Infusion Services, LVHN Cancer Center–Hazleton
- ▶ Infusion Services, LVPG Hematology Oncology–Lehighton



EDUCATION

POSTGRADUATE YEAR ONE (PGY1) RESIDENCY PROGRAM

The LVHN program has been accredited by the American Society of Health-System Pharmacists (ASHP) since 2007. Our program prepares pharmacists for clinical or teaching positions, or for PGY2 training in a community hospital setting. The program currently has 14 preceptors who offer a broad range of learning experiences.

We would like to congratulate our 2018 graduates:

- ▶ Kyle O'Brien, PharmD – Unit-based clinical pharmacist at the Hospital of University of Pennsylvania, Philadelphia, Pa.
- ▶ Elizabeth Shober, PharmD – Clinical staff pharmacist at Lehigh Valley Health Network, Allentown, Pa.

18 PHARMACY STUDENT INTERNS
WERE EMPLOYED IN THE DEPARTMENT IN FY18.

PHARMACY STUDENTS

LVHN has student affiliation agreements in place with five schools of pharmacy: Temple University School of Pharmacy, Thomas Jefferson College of Pharmacy, University of Rhode Island College of Pharmacy, University of the Sciences' Philadelphia College of Pharmacy and Wilkes University's Nesbitt School of Pharmacy. In this last academic year, eight clinical specialists and administrators precepted 19 student rotations. Rotations offered included critical care, hospital/institutional, infectious diseases, internal medicine, oncology and pediatrics. Eighteen pharmacy student interns were employed in the department in FY18. Three of the five interns who graduated from pharmacy school entered into a pharmacy residency program.

Health Spectrum Pharmacy Services offered two student rotations in retail pharmacy. Ten pharmacy interns were employed in FY18.

ACCREDITATION COUNCIL FOR PHARMACY EDUCATION (ACPE)

The Pharmacy Department is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a Provider of Continuing Pharmacy Education through Jan. 31, 2022.

- ▶ LVHN Pharmacy Department sponsored five ACPE activities accounting for 161 certificates and 24 CEU or 240 continuing education credit hours for pharmacy staff.
- ▶ LVHN Pharmacy Department co-sponsored seven ACPE activities accounting for 64 certificates and 9.2 CEU or 92 continuing education credit hours for pharmacy staff.

240

CONTINUING EDUCATION CREDIT
HOURS FOR PHARMACY STAFF

MEDICATION SAFETY

LVHN has a dedicated medication safety officer who assists all health care professionals in the safe, efficient delivery of health care. The medication safety officer works with nursing,

health care informatics, providers and ancillary health care professionals to keep the chance of hurting a patient due to medication error to about four in a million.

IMPROVEMENTS THAT CONTRIBUTE TO THIS SAFETY LAYER INCLUDE:

- ▶ Continual quality management of hospital system to ensure the safety of our medication management systems.
- ▶ Cooperation with senior leadership and the Board of Trustees that propels LVHN's commitment to safety forward.
- ▶ Surveillance of controlled substance administration to strive for a system that prevents diversion and maintains the highest standard of medication availability.
- ▶ Supports the network's role in research as chairman of the Institutional Review Board.

CLINICAL SERVICES

CLINICAL PHARMACISTS

LVHN pharmacists continue to be actively involved in all areas of patient care at our hospitals and even some outpatient sites.

Rounding services with pharmacist participation support multiple rounding and reaching services with internal medicine, family medicine, critical care, cardiology, oncology, pediatrics, infectious disease and more.

In FY18, our pharmacists counseled over 1,000 patients at LVH-Cedar Crest and over 500 at LVH-Muhlenberg in an effort to improve patients' insight of how to take their medications, know what the medications are used for and understand medication side effects. Additionally, our pharmacists and pharmacy residents visited over 150 patient

homes through a joint pilot program with the department of family medicine and funded through the Geriatric Workforce Enhancement Program (GWEP) grant. This program focused on comprehensive medication review and reconciliation with recommendations made to eliminate unnecessary medications and optimize therapy. Along with nurse care manager interventions, these patients saw a 30 percent reduction in ED visits, and medication-associated cost avoidance was almost \$250,000.

- ▶ On the inpatient side, our pharmacists made 68,980 interventions with a hard savings of around \$744,000.
- ▶ LVHN pharmacists remain at the forefront, finding new ways to reduce costs and improve patient care while ensuring safe and effective medication use.

IN FY18, OUR PHARMACISTS COUNSELED OVER 1,000 PATIENTS AT LVH-CEDAR CREST AND OVER 500 AT LVH-MUHLENBERG.

PHARMACISTS MADE 68,980 INTERVENTIONS WITH A HARD SAVINGS OF AROUND \$744,000.

68,980
INTERVENTIONS



IN FY18, OUR MOBILE REFILL APPLICATION, MOBILERX, ADDED 192 NEW USERS AND HELPED TO TRIAGE 9,320 REFILLS TO OUR RETAIL LOCATIONS.

DOSEEDGE
Pharmacy Workflow Manager

INPATIENT TECHNOLOGY

In the past year, inpatient pharmacies finished implementing Pyxis medication and supply management systems in all areas with installation of two Pyxis Medstation™ 4000 systems in patient care areas and two Pyxis™ Anesthesia 4000 systems in procedural areas.

Along with Pyxis 4000 systems, we also continued to roll out Codonics Safe Label Systems™ throughout operating rooms and procedural areas. Codonics Safe Label System is a complete solution that improves patient safety and labeling compliance in operating rooms (OR) or anywhere syringes are prepared. It prints full-color labels including a 2D bar code that can be enabled for electronic documentation of medication in patients' health or anesthesia records. This helps reduce common drug errors made in the OR during medication preparation and administration. We added two Codonics printers this past year.

Our IV room at Lehigh Valley Hospital (LVH)–Cedar Crest gained some technology in the past year. In November 2017, we implemented three DoseEdge® workflow stations. This first true technology system introduced into our IV room workflows utilizes bar-code scanning and preparation photos to verify accuracy of preparation. The system helps to promote safety, reduce waste and enhance productivity for our pediatric and oncology population. We are planning to implement two additional workstations in early FY19.

Lastly, our SwissLog robots located at both LVH–Cedar Crest and LVH–Muhlenberg have been implemented for 10 years or more. We are in the process of working with SwissLog to update some of our equipment so we can guarantee longer life of our dispensing robots. LVH–Muhlenberg completed its first year of refurbishment; LVH–Cedar Crest will begin its year-one updates in mid FY19. LVH–Muhlenberg also will be adding the SwissLog Box Station to its dispensing model in FY19.

HEALTH SPECTRUM TECHNOLOGY

Health Spectrum Pharmacy Services continues to use technology to leverage time and resources. To date, our interactive voice response (IVR) system has answered 829,103 phone calls, submitted 297,277 refills and recorded 68,905 voice messages, freeing time for colleagues to better serve the needs of patients.

Additionally, we utilize automation solutions from several different companies to assist in filling vials, counting pills, creating individualized medication packets and monitoring the overall workflow of our pharmacies. At our new state-of-the-art Infusion Pharmacy location, we're utilizing a product called AeroScout to monitor the temperatures of refrigerators at one central location. This saves time in having to visit each unit and record measurements individually.

As our network continues to grow, so will utilization of these systems to help us remain lean, efficient and focused on services we provide to our patients and community.

297,277

IVR SYSTEM REFILLS SUBMITTED

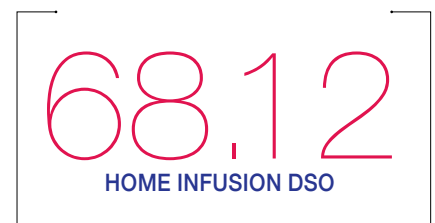


MEDICAL SUPPLIES DIVISION

Our medical supplies division assists patients with items such as Jobst® vascular garments, diabetic supplies, post-mastectomy products, and wound, ostomy and breastfeeding supplies. As a Board of Certification/Accreditation (BOC)-accredited facility, our division's certified fitters ensure patients' orthotic products fit properly.

BILLING AND ACCOUNTS RECEIVABLE

The billing department of Health Spectrum Pharmacy Services consists of five dedicated employees who have taken ownership of billing and collection responsibilities. The past fiscal year has been the strongest to date. Using cash collections as a barometer for success, the billing department has not disappointed. This year the billing department collected \$85 million in receivables. Another nationally accepted standard for measurement is average DSO (days sales outstanding). In this category, the department falls below the national average for this business type. Home infusion DSO is currently at 68.12 with industry average between 84 and 88. Retail, which includes HME (home medical equipment), is 16.50. There is no published industry average for this type of hybrid combination of retail and HME, but compared to what we know about HME, it also falls below industry average.





PATIENT INTERVENTIONS

2,347

INTEGRATED CARE COORDINATION – POPULATION HEALTH

The Integrated Care Coordination (ICC) Clinical Pharmacy Team, formerly the Community Care Team, continues to provide comprehensive medication management through referrals from providers and team members for high-risk patients with frequent hospitalizations or chronic conditions such as diabetes, heart failure and COPD. In FY18, we received 1,359 referrals, worked with 951 patients and made 2,347 interventions. These interventions were associated with a cost-avoidance of approximately \$900,000. In June 2018, clinical pharmacists Jennifer Cicconetti, Lauren Geerlof and Laura Mauro (not pictured) welcomed Michelle Omari-Okyere to our team from the inpatient pharmacy and Geriatrics Workforce Enhancement Program (GWEP) grant.

In addition to current clinic spaces at Health Spectrum Pharmacy–Cedar Crest and LVHN Express Care–Muhlenberg, services have expanded to the Health Center at Palmer Township and Health Center at Fogelsville. These centralized locations provide patients with increased access to pharmacy services across the Lehigh Valley.

ICC pharmacists continue to provide medication therapy management (MTM) services for qualifying Highmark Medicare Advantage patients. In 2017, we completed comprehensive medication reviews for ~50 percent of patients attributed to our five LVPG “pilot” practices. Based on these results, the pilot was expanded to include eight LVPG practices, and workflow changes have allowed for completion

of an even higher percentage of MTM sessions compared to last year. Between April and June 2018, the team completed 40 MTM encounters and made 136 interventions, which equates to a cost avoidance of over \$40,000. We are hopeful that this work will have a positive impact on the network’s Medicare STARs quality ratings for 2018.

In February 2018, the pilot phase of an exciting new initiative began: a collaborative drug therapy management agreement for adult patients with uncontrolled type 2 diabetes. Through the collaborative agreement, ICC pharmacists have the ability to modify drug regimens to help patients reach their intended therapy goals (e.g., A1c). If patients reach their goals, they are referred back to their PCP; if not, they are referred to endocrinology for further management. Over the course of five months, 26 referrals were received from two pilot practices (LVPG Family Medicine–Southside and LVPG Family Medicine–Fogelsville). A total of 12 patients agreed to enroll in the program, four of whom were lost to follow-up. The “average patient” referred to the program has an A1c of 10.2 percent and is already on two or more diabetic medications. To date, one patient has completed the program (baseline A1c 9.8 percent, A1c after intervention 7.2 percent; patient-specific A1c goal < 8 percent). Data collection is ongoing, and we look forward to reviewing our outcomes and the possibility of expanding this program.

STRATEGIC PLAN FOR FISCAL YEAR 2019

Pharmacy Services remains driven to do more in support of our mission to heal, comfort and care for the people of our community. To succeed, we are guided by the Quadruple Aim, a framework that helps us produce better health, better care, better cost and a better colleague experience.

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

- ▶ Focus on improving “medication-related scores”
- ▶ Continue to implement impactful pharmacy strategies

Lehigh Valley Hospital (LVH)-Cedar Crest Emergency Department Expansion

- ▶ Help design the LVH–Cedar Crest Emergency Department expansion to ensure efficient pharmacy workflow
- ▶ Establish emergency medicine clinical specialist within the department

Lehigh Valley Children’s Hospital (LVCH)

- ▶ Expansion, relocation and consolidation to centralize inpatient pediatric services within the Jaindl Pavilion including a complete renovation of the fifth floor of the Jaindl Pavilion to accommodate pediatric inpatient units located in Pool 4B and 4C units
- ▶ Design a full-service pediatric pharmacy with unit dose and cleanroom capabilities to service LVCH

DoseEdge

- ▶ Continue to enhance cleanroom workflow
- ▶ Continue to expand utilization into additional areas of the cleanroom

Therapeutics

- ▶ Integrate LVH–Schuylkill into the health system therapeutics committee
- ▶ Integrate LVH–Pocono into the health system therapeutics committee
- ▶ Continue to drive impactful value-based reductions in overutilization

LVH–Muhlenberg Pharmacy Cleanroom Expansion

- ▶ Expand LVH–Muhlenberg inpatient pharmacy to maintain compliance with new USP 797/800 regulations
- ▶ Continue operations during construction
- ▶ Installation and implementation of Swisslog BoxPicker

LVH–Cedar Crest RRC 340B pharmacy operations

- ▶ Recruit and hire the 340B team
- ▶ Maximize saving opportunities
- ▶ Conduct compliance review

LVH–Hazleton

- ▶ Continue to design the Hazleton Airport Road Health and Wellness Campus
- ▶ Continue to design Health Spectrum Pharmacy Services–Hazleton

LVH–Schuylkill

- ▶ Convert wholesaler from McKesson to Cardinal
- ▶ Open hospital-based multipurpose infusion center
- ▶ Convert from RRC 340B status to DSH 340B status

LVH–Pocono

- ▶ Convert wholesaler from McKesson to Cardinal
- ▶ Implement compliant DSH 340B pharmacy operations
- ▶ Continue to design Pocono-West hospital

Specialty and Retail Pharmacy Division

- ▶ Open Specialty Pharmacy at 2024 Lehigh St.
- ▶ Meet and exceed Specialty Pharmacy Business Plan
- ▶ Continue to work on the expansion of HSPS at LVH–17th Street

Home Infusion Division

- ▶ Optimize efficiency at new 2024 Lehigh St. location
- ▶ Continue to explore alternate site of care infusion options for LVHN

AllSpire Group Purchasing Organization

- ▶ Utilize HealthTrust and AllSpire Pharmacy Collaborative to drive savings
- ▶ Utilize AllSpire Pharmacy Clinical Collaborative Meetings to continue sharing best practices

PHARMACY SERVICES STAFF

LOCATION	POSITION	FTE
Hazleton	Pharmacist	9.61
	Pharmacy Tech	8.45
	Additional Staff	2
		20.06
Schuylkill	Pharmacist	10.66
	Pharmacy Tech	7.45
	Interns	0.03
	Additional Staff	0.94
		19.08
Pocono	Pharmacist	17.86
	Pharmacy Tech	13
	Interns	0.82
	Additional Staff	3
		34.68
Muhlenberg	Pharmacists	14.45
	Pharmacy Tech	12.15
	Interns	0.05
	Additional Staff	1
		27.65
MPA	Pharmacists	7.6
	Pharmacy Tech	6
		13.6
Cedar Crest	Pharmacists	51.21
	Pharmacy Tech	46.27
	Interns	1.11
	Additional Staff	12
		110.59
HSPS Retail	Pharmacists	16.43
	Pharmacy Tech	25.91
	Interns	0.1
	Medical Supply Specialists	3.61
	Additional Staff	2
		48.05

LOCATION	POSITION	FTE
HSPS Specialty	Pharmacists	2
	Pharmacy Tech	2
	Additional Staff	1
		5
HSPS Home Infusion	Pharmacists	4
	Pharmacy Tech	2.01
	Nurse Clinicians	2
	Delivery Tech	4.41
	Patient Services Coordinator	1
	Financial Coordinators	2
		15.42
HSPS Billing	Accounts Receivable Specialists	3
	Financial Coordinators	2
	Additional Staff	3
		8
LVMS	Medical Supplies Specialists	2

BOARD-CERTIFIED PHARMACISTS
26%

PHARMACISTS CERTIFIED TO ADMINISTER IMMUNIZATIONS
40%

CERTIFIED PHARMACY TECHNICIANS
76%

COMMUNITY ACTIVITIES

- ▶ Adopted Christmas family
- ▶ Allentown Rescue Mission
- ▶ Angel 34 volunteer
- ▶ Blood Drive
- ▶ Cetronia Ambulance volunteer
- ▶ Collection of gifts for infusion patients at Bangor for Christmas, Valentine's and Easter holidays
- ▶ Jordan Lutheran Church Mutual Ministry and New Member Follow
- ▶ Lehigh County Special Olympics Polar Plunge
- ▶ Light the Night (Leukemia and Lymphoma Society)
- ▶ LVHN Community Flu Campaign 2018
- ▶ Nazareth Area Food Bank
- ▶ Pediatric Cancer Foundation of Lehigh Valley Bake Sale
- ▶ Senior citizens Meals on Wheels decorate Christmas Tree Project
- ▶ Senior Expo LVHN
- ▶ Stack the Pack – school supplies
- ▶ Street Medicine Holiday Collection
- ▶ Via Marathon volunteer



DEPARTMENT COMMUNITY/ VOLUNTEER SERVICE

WALKS/RUNS PARTICIPATION

- ▶ Great Ambulance Chase
- ▶ Lehigh Valley Walk for Children with Apraxia of Speech
- ▶ March for Babies
- ▶ Save the Horses 5K
- ▶ Via Marathon
- ▶ Women's 5K Classic for support of breast and gynecologic cancer programs

AWARDS/NOMINATIONS

FRIENDS OF NURSING

Recipient

- ▶ Joseph Ottinger
Award for Excellence as a Pharmacist

Nominees

- ▶ Derek Jones
- ▶ Arun Mancheril
- ▶ Kristin Held Wheatley

PRESENTATIONS/PUBLICATIONS/POSTERS

JARROD KILE

Presentations

- ▶ Antimicrobial Stewardship, Medical Intern Survival Guide series presentation – June 2017
- ▶ Antimicrobial Stewardship, Infection Control presentation – August 2017
- ▶ “Risk Management and Legal Considerations in Street Medicine,” International Street Medicine Institute Conference, Allentown, Pa. – October 2017
- ▶ Antimicrobial Stewardship, DeSales University Physician Assistant Program presentation – January 2018
- ▶ Antimicrobial Stewardship, long-term care facility (LTCF) presentation – February 2018
- ▶ “The Antibigram,” Department of Medicine monthly meeting – May 2018

Poster

- ▶ “A Rare Case of Complicated Cutaneous Leishmaniasis,” Sandhya Venkataraman, DO, Lalita G. Shastry, MD, Luther Rhodes, MD, Jarrod Kile, RPh

Credentialing

- ▶ Credentialed within the Department of Medicine as an Allied Health Professional – November 2017

JASON LASKOSKY

Presentations

- ▶ “Economic Impact of Pharmacist Participation in the Neurocritical Care Unit,” poster – Neurocritical Care Conference, Waikoloa, Hawaii – October 2017
- ▶ “When Less is More...Drugs in the Elderly,” – First Annual Fleming Geriatric Trauma Conference, Allentown, Pa. – November 2017
- ▶ “Phenobarbital as an Alternative Sedation Agent in Sedation Problematic Burn ICU Patients,” 40th Annual John A. Boswick Burn and Wound Care Symposium, Maui, Hawaii – February 2018

Pearls

- ▶ New glucocorticoid in septic shock trials – Brief trial review – March 2018
- ▶ KCentra – Compatibility and Flushing; Dexmedetomidine RCT review and stats – March 2018
- ▶ Targeted Temperature Management – Update – April 2018
- ▶ Saline vs. balanced solutions for resuscitation – a topic of ongoing debate – June 2018

KYLE O'BRIEN

Presentations

- ▶ Histoplasmosis and Blastomycosis, nurses and care managers – November 2017
- ▶ Insulin lecture, Family Medicine residents – December 2017
- ▶ Antibiotics lecture, Family Medicine residents – October 2017
- ▶ Research Abstract and Methods poster, American Society of Health-System Pharmacists Midyear Clinical Meeting, Orlando, Fla. – December 2017
- ▶ GWEP Clinical Pharmacist, medical students – February 2018
- ▶ Hepatitis B Vaccine Comparison, LVPG Safety – April 2018
- ▶ Pulmonary Rehab provided education on medications and inhaler technique – May 2018
- ▶ Presentation of Final Research Project at Night of the Residents MEPSHP – May 2018
- ▶ Research Result Presentation, Eastern States – May 2018
- ▶ PPAG febrile neutropenia
- ▶ “Pediatric Headache Acute Treatment,” Pediatric Pharmacist meeting – June 2018

Pearls

- ▶ Gentamicin and Ampicillin in Neonatal Sepsis, pharmacy staff – July 2017
- ▶ Goodpasture Syndrome, pharmacy staff – August 2017
- ▶ Sick Day Rules in Peds, pharmacy staff – September 2017
- ▶ JC – Compass trial Riv and ASA, pharmacy staff – October 2017
- ▶ LABA/LAMA inhalers, pharmacy staff – October 2017
- ▶ What is Heme is Porphyrin, pharmacy staff – October 2017
- ▶ Athos-3 JC, pharmacy staff – February 2018
- ▶ Combination PAH Therapy, pharmacy staff – March 2018

JOSEPH OTTINGER

Presentations

- ▶ Provided a pharmacy education home study module entitled, “Prosthetic Heart Valve Thrombosis: Introduction and Review of Thrombotic Risk” home study module for 0.2 CEU
- ▶ Provided a one-hour presentation on, “Antibiotics Use in Dentistry” to dental residents
- ▶ Provided a one-hour presentation on, “Pain Management in Dentistry” to dental residents

JESSICA PRICE

Presentations

- ▶ Diabetes Pearls: Glucose Management at Lehigh Valley Health Network (LVHN). ACPE 1.25 contact hours – May 2018
- ▶ Hypoglycemia treatment: safe use of highly concentrated IV dextrose for nursing education – August 2017

ELIZABETH SHOBER

Presentations

- ▶ HIV testing overview to LVPG Infectious Diseases Staff – September 2017
- ▶ Treatment of Pulmonary Embolisms – November 2017
- ▶ Antibiotics lecture, Family Medicine residents – October 2017
- ▶ Inpatient hyperglycemia management lecture, Family Medicine residents – December 2017
- ▶ Education on inhaler medications and technique, Pulmonary Rehabilitation – November 2017 and February 2018
- ▶ Update on HF treatment guidelines, pharmacists – May 2018
- ▶ Characterization of antibiotic use within pediatric patients with cystic fibrosis, Eastern States – May 2018
- ▶ Characterization of antibiotic use within pediatric patients with cystic fibrosis, Night of the Residents – May 2018
- ▶ Non-neonatal Sepsis, PPAG Core Competency – June 2018

Posters

- ▶ “Characterization of Antibiotic Use Within Pediatric Patients With Cystic Fibrosis,” O’ Brien, Wheatley, MacFarlan, Jabbour, American Society of Health-System Pharmacists Midyear Clinical Meeting, Orlando, Fla. – December 2017

Journal club

- ▶ Sotagliflozin added to insulin in patients with T1DM – November 2017
- ▶ Ticagrelor vs clopidogrel after fibrinolytic therapy in STEMI – May 2018

Pearls

- ▶ Factor products review – October 2017
- ▶ Neurosyphilis mini pearl – November 2017
- ▶ Mobile health and its potential role – May 2018

SUSAN WARRINGTON

Presentation

- ▶ Continuing Education: “2017 Clinical Reasoning Series. Status Asthmaticus: Beyond Basic Treatments,” American College of Clinical Pharmacy, Annual Conference, Phoenix – October 2017

Publication

- ▶ Warrington SE. Pediatric resuscitation. In Buck ML, Manasco KB, eds. Pediatric Self-Assessment Program, 2017 Book 2. Pediatric Emergencies. Lenexa, KS: American College of Clinical Pharmacy, 2017:47-64

Poster

- ▶ Welsh S, Polsky T, Lim D, Warrington S, Boyer D. Pseudohyponatremia due to esmolol: a novel case report of drug interference in laboratory testing. [abstract] Crit Care Med. 2018;46(1):421

Pearls

- ▶ Refresher – Ceftriaxone precautions in neonates
- ▶ NICU IV Compatibility Module (Nursing Education)
- ▶ Labeling changes to furosemide 10 mg/mL oral solution
- ▶ Rotavirus vaccine update
- ▶ Updates to cholestyramine powder dispensing in pediatric units

KRISTIN WHEATLEY

Presentations

- ▶ Shober E, Wheatley KH. “Characterization of Antibiotic Use Within Pediatric Patients With Cystic Fibrosis,” American Society of Health-System Pharmacists Midyear Clinical Meeting, Orlando, Fla. – December 2017
- ▶ O’Brien K, Wheatley KH, Macfarlan J, Jabbour EN. “Impact of a Transition of Care Pharmacy Program on a Medical Surgical Unit on 30-day Readmission Rates,” American Society of Health-System Pharmacists Midyear Clinical Meeting, Orlando, Fla. – December 2017
- ▶ Sterner, L, Villalobos-Fry T, Wheatley KH. “Evaluation of Antibiotic Allergy Documentation in Pediatric Patients,” Research Day, Lehigh Valley Health Network, Allentown, Pa. – August 2017
- ▶ “Antimicrobial Stewardship in Pediatrics – Outpatient Considerations,” Mideastern Chapter Pennsylvania Society of Health-System Pharmacists meeting – November 2017
- ▶ “Weeding Through Medical Marijuana Use in Pediatrics,” Pediatric Grand Rounds – October 2017
- ▶ Antibiotics I – Pediatric Medical Residents PediaPred lecture series – July 2017
- ▶ Antibiotics II – Pediatric Medical Residents PediaPred lecture series – August 2017

