

PHARMACY SERVICES
ANNUAL REPORT 2020



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GREETINGS FROM THE ADMINISTRATOR

I am pleased to present the fiscal year 2020 Annual Report. This report outlines the accomplishments made by Pharmacy Services as we further our mission to heal, comfort, and care for the people of our community. To succeed, we continue to be guided by the Quadruple Aim, a framework that helps us produce better health, better care, better cost, as well as a better colleague experience. Pharmacy Services 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.



The safety and quality performance across all sites continues to shine as we dispensed over **8 million** doses, and our LVHN harmful error rate was three errors per million doses dispensed. We provided clinical interventions on **78,688** orders that resulted in safer care and cost reductions of more than **\$695,248**. Our retail, infusion and specialty pharmacy divisions continue to grow financially while providing high-quality patient care and customer service. In fiscal year 2020, those divisions generated **\$9** million in operating income. Additionally, our alignment with the LVHN Health Plan continues to offer significant savings to the network.

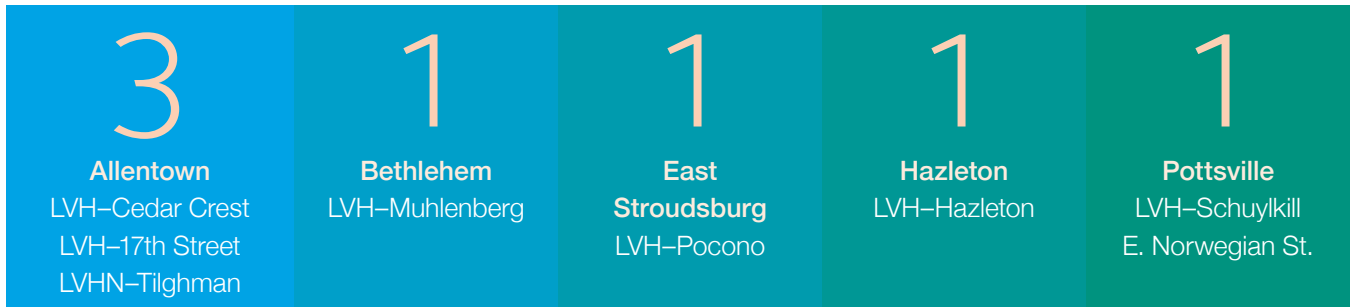
Despite the hardships caused by the COVID-19 pandemic, our team continued to provide world-class pharmacy services while being committed to keeping our patients and each other safe. This year revealed the true grit and determination of our pharmacies to care for the people of this community.

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, MBA
Administrator, Pharmacy Services

LVHN INPATIENT PHARMACY SERVICES

INPATIENT PHARMACIES – ONE AT EACH OF OUR SEVEN HOSPITAL LOCATIONS IN PENNSYLVANIA



3

Allentown

LVH–Cedar Crest
LVH–17th Street
LVHN–Tilghman

1

Bethlehem

LVH–Muhlenberg

1

East Stroudsburg

LVH–Pocono

1

Hazleton

LVH–Hazleton

1

Pottsville

LVH–Schuylkill
E. Norwegian 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 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: 1,247

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
- Inpatient Rehab

LVH–MUHLENBERG

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

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: 186

- 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: 261

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

FISCAL YEAR 2020 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 8,731,971

ORDERS VERIFIED 3,102,360

INTERVENTIONS 78,688

HARD COST SAVINGS FROM INTERVENTIONS \$695,248

DRUG EXPENSE \$205,111,506

LEHIGH VALLEY PHARMACY SERVICES LOCATIONS FISCAL YEAR 2020

- Lehigh Valley Pharmacy Services–Cedar Crest, 1202 S. Cedar Crest Blvd., Allentown
- Lehigh Valley Pharmacy Services–17th Street, 1637 Chew St., Allentown
- Lehigh Valley Pharmacy Services–Muhlenberg, 2545 Schoenersville Road, Bethlehem
- Lehigh Valley Pharmacy Services–Pocono, 206 E. Brown St., East Stroudsburg
- Lehigh Valley Pharmacy Services–Infusion, 2024 Lehigh St., Suite 500, Allentown
- Lehigh Valley Pharmacy Services–Specialty Division, 2024 Lehigh St., Suite 600, Allentown
- Lehigh Valley Pharmacy Services, LVH–Schuylkill E. Norwegian St., Pottsville

FISCAL YEAR 2020 RETAIL AND SPECIALTY STATISTICS

RETAIL PHARMACY DIVISION

Lehigh Valley Pharmacy Services are located at LVH–Cedar Crest, LVH–17th Street, LVH–Muhlenberg, LVH–Pocono and LVH–Schuylkill. 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

424,818

TOTAL INFUSION PATIENTS

4,241

TOTAL REVENUE

\$104,691,918

TOTAL DRUG EXPENSE

\$81,826,021

OPERATING INCOME

\$9,246,097

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 FY20, we added **1** pharmacist to the specialty division, and **2** pharmacy coordinators.

HOME INFUSION DIVISION

Lehigh Valley 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, Lehigh Valley Pharmacy Services' 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. In December 2019, the 2024 Infusion Suite was utilized for patient treatment for the first time. Throughout the remainder of FY20, **43** infusions were administered in the on-site suite.

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 Lehigh Valley 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 **\$119 million** in receivables. Another nationally accepted standard for measurement is average days sale outstanding (DSO). In this category, the department falls below the national average for this business type. Home infusion DSO is currently at **40.33** with industry average at 68. Retail, which includes home medical equipment (HME), is **19.57**. 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.





CANCER/AMBULATORY INFUSION CENTERS



- 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, Health Center at Bangor
- Infusion Services, Dale and Frances Hughes Cancer Center at Lehigh Valley Hospital–Pocono
- Infusion Services, LVHN Cancer Center–Hazleton
- Infusion Services, LVHN Cancer Center–Schuylkill

The Cancer Outpatient Infusion Centers continued to be busy throughout the year. We continue to work together to ensure continuity of care for patients who may travel to different sites to be treated. By having representation from all sites on the Oncology Therapeutics committee, new information can be disseminated faster. Oncology therapeutics discusses all new medications used in the infusion center as well as inpatient oncology, new formulations of medications, biosimilar medications, and any financial and insurance issues that may impact the infusion centers.

The following is a list by site of visits for FY20. The southern tiers areas are: Multi-purpose area at Cedar Crest: 28,053 visits; Multipurpose area at Muhlenberg: 14,278 visits and Bangor: 2,547 visits. The northern tiers are: Pocono: 10,432 visits; Hazleton: 3,696 visits and Schuylkill: 2,831 visits. The infusion center visits were at an all-time high until COVID-19 occurred.

Oncology patients still came regularly for treatment, but many other patients, such as those receiving treatment for neurologic or rheumatologic conditions, waited for treatment until June when our numbers increased dramatically. We assured patients that every precaution was being taken for their safety, including frequent cleaning, mask usage and social distancing.

Our clinical trial program currently enrolls patients at LVH–Cedar Crest, LVH–Muhlenberg and LVH–Pocono. In FY20, 505 patients were accrued for both treatment and tissue trials from the National Cancer Institute, Memorial Sloan Kettering and pharmaceutical companies. Our alliance with Memorial Sloan Kettering allows our patients to be treated with the most current trials and many times be able to stay close to home to be treated. Our clinical trials pharmacist has played an important role in helping the clinical trials department this year.

MULTI-PURPOSE AREA AT CEDAR CREST

28,053

MULTI-PURPOSE AREA AT MUHLENBERG

14,278

BANGOR

2,547

POCONO

10,432

HAZLETON

3,696

SCHUYLKILL

2,831

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 13 preceptors who offer a broad range of learning experiences.

We would like to congratulate our 2020 graduates:

Clarence Kyle Walker, PharmD, Clinical Staff Pharmacist at Lehigh Valley Health Network, Allentown, Pa.

Rachael Gerstein, PharmD, PGY2 Oncology Residency – Yale New Haven Health – New Haven, Conn.

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 21 student rotations. Rotations offered included critical care, hospital/institutional, infectious diseases, internal medicine, oncology and pediatrics.

Lehigh Valley Pharmacy Services employed 10 pharmacy interns in FY20.

ACCREDITATION COUNCIL FOR PHARMACY EDUCATION (ACPE)

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

- Sponsored 10 ACPE activities accounting for 316 certificates and 43.75 CEU or 437.5 continuing education credit hours for pharmacy staff.
- Co-sponsored 2 ACPE activities accounting for 9 certificates and 4.8 CEU or 48 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 SERVICES

Clinical pharmacist services at LVHN made a major pivot midway through FY20 as COVID-19 spread through the United States. Our pharmacists played integral roles on the network's Clinical Steering Committee and the COVID-19 Command Center. We made recommendations surrounding medication therapy as well developing novel strategies to conserve medications in short supply due to the national strain on the medication supply chain. We doubled the number of pharmacists supporting our critical care units during the height of our response and quickly expanded our technology capabilities to offer clinical services remotely. FY20 was a unique year for the clinical pharmacy team, but they showed their ability to adapt and deliver high-quality results quickly and efficiently.

INPATIENT TECHNOLOGY

FY20 was busy with new technology implementations and planning. LVH–Cedar Crest implemented KitCheck, which is a technology that checks our code trays 80% faster than manual processes using RFID technology. It also gives the pharmacy increased visibility of inventory across the hospital to allow us to respond to drug shortages and recalls more efficiently. This technology is being planned for other sites as well. A new Epic module, DispensePrep, was implemented at LVH–Cedar Crest first for non-sterile oral dose syringes, and soon the entire IV room will prepare sterile products using DispensePrep. DispensePrep provides for safer processes in the pharmacy using bar-code scanning and high-resolution image capture in our preparations. The most exciting development in the technology space is the selection of Omnicell as our new vendor for automated dispensing cabinets. In FY21, we will begin the process of replacing our Pyxis machines with Omnicell cabinets across the network.

LEHIGH VALLEY PHARMACY SERVICES TECHNOLOGY

Lehigh Valley Pharmacy Services continues to use technology to leverage time and resources. To date, our interactive voice response (IVR) system has answered over 1.4 million phone calls, submitted 466,284 refills and recorded 104,342 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.

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.





INTEGRATED CARE COORDINATION – POPULATION HEALTH

The Integrated Care Coordination (ICC) clinical pharmacy team continues to provide comprehensive medication management for high-risk patients with frequent hospitalizations or chronic conditions such as diabetes, heart failure and COPD. The ICC team overall has a primary focus centered on our Medicare, Medicaid, and self-pay population. This year the team welcomed its first dedicated pharmacist manager role. Additionally, two residency-trained ambulatory care pharmacists joined the team, assisting patients in meeting their health care goals and working to reduce medication-related costs. In fiscal year 2020, we received **1,154** referrals from providers, team members and registries, worked with **1,144** total patients, made **4,736** contacts, and generated **2,253** interventions. These interventions

were associated with a cost-avoidance of approximately **\$675,500**.

ICC clinical pharmacists continued to provide medication therapy management (MTM) services for qualifying Highmark Medicare Advantage patients. In 2019, using combined data with Highmark, 376 of 449 (**83.7%**) LVPG Lehigh patients received MTM services, achieving a 4 Star rating overall. Of the 449 patients, the ICC clinical pharmacists were attributed 142 patients and achieved 125 (**88%**) completed comprehensive medication reviews for patients from our eight assigned LVPG practices, the equivalent to a maximum 5 Star Medicare rating. In fiscal year 2021, the ICC pharmacists are looking forward to providing MTM services to Gateway member patients.

Our collaborative drug therapy management agreement for adult patients with uncontrolled type 2 diabetes has recently expanded to a total of 8 family medicine practices. Through this agreement, we have the ability to modify drug regimens to help patients reach their intended therapy goals. During fiscal year 2020, 84 patients were referred to the program, with 49 of those patients enrolling. Patients had an average A1c of 10.5% at time of enrollment, and the program demonstrated an average A1c reduction of 2.5% in managed patients and 2.4% in the total population. For more information, consider checking out our poster “Working Together to Improve Outcomes: Physician-Pharmacist Collaborative Agreement for Uncontrolled Type 2 Diabetes” presented at the Society of Teachers of Family Medicine Conference on Practice and Quality Improvement in December 2019 (data on poster only through November 2019) via the LVHN Scholarly Works website.

Contributing to the development of clinical pharmacists brings value to both learner and educator. Together with PGY1 Pharmacy Residency Program Director, an ambulatory care longitudinal learning experience was created, and the team began the year with its first two PGY-1 pharmacy residents in population health. Emphasis of this rotation was placed on direct patient care and provider interaction in an interdisciplinary team setting. The experience also focused on improving health outcomes in high-risk patients in primary care practices at LVH-17th Street.

The ICC clinical pharmacists work out of 5 clinic spaces – Lehigh Valley Pharmacy–Cedar Crest, LVHN ExpressCARE–Muhlenberg, Health Center at Palmer Township, 3080 Hamilton Blvd. building,

and Health Center at Fogelsville – to provide patients with centralized locations to give increased access to pharmacy services across the Lehigh Valley for face-to-face contact. However, due to health concerns with the spread of COVID-19, patients and team members found themselves adhering to social distancing guidance. The ICC clinical pharmacists then transitioned to virtual means of communicating with patients.

In the last quarter, the team proactively reached out to members of our MSSP population who may have been impacted by COVID-19 in missed appointments with their primary care providers for chronic care management. Clinical pharmacists also were heavily involved in conducting primary and secondary contact tracing, and helped to facilitate connection to appropriate triaging services and information provided by state and CDC guidelines. Additionally, the clinical pharmacists successfully implemented video visits to reduce gaps in chronic care management services, particularly for those patients who were being managed in concert with participating providers in collaborative practice agreements. Telehealth services, including phone and video visits, expand clinical pharmacy ambulatory care services to improve patient access to care, increase patient satisfaction, and gives the pharmacist the ability to assess device technique and view medication containers without the patient having to leave home.

In fiscal year 2021, the ICC clinical pharmacist team is excited to offer video visits to all patients with video capable devices, provide continued support through the COVID-19 pandemic, show success in MTM services, and further expand collaborative practice partnerships with LVPG providers.



POPULYTICS CARE COORDINATION – POPULATION HEALTH

As the Integrated Care Coordination pharmacy team continues to help improve the care of Medicare and Medicaid patients, Populytics Care Coordination has expanded to include pharmacy services to patients and providers whose commercial insurance members participate in plans with risk-sharing arrangements with the Lehigh Valley Physician Hospital Organization (LVPHO). The team is centrally located at One City Center in Allentown and began with two doctoral level clinical pharmacists led by the Populytics Medical Director in November 2019.

COMPREHENSIVE MEDICATION REVIEWS

182

DEPRESCRIBING RECOMMENDATIONS

1,306

ESTIMATED COST AVOIDANCE

\$449,140

In order to help maximize the value of the care provided by LVPHO providers in the Lehigh Valley, several tactics have been employed since the team's launch. Pharmacists have conducted **182 comprehensive medication reviews for patients** who are either referred from LVPHO providers or are determined to be at high risk due to chronic conditions and medication burden (including medication therapy management, MTM, for Medicare Part D members). Because certain **gaps in clinical care can lead to worse clinical outcomes**, the team also reaches out to patients and providers to help close care gaps in patients with diabetes, cardiovascular disease, osteoporosis and rheumatoid arthritis. Another **value enhancing tactic is deprescribing**. There are certain medications that when prescribed together have no clinical benefit. The clinical pharmacists review data registries and when appropriate communicate these recommendations to providers. From November 2019 through June 2020,

the Populytics clinical pharmacists made a total of **1,306** recommendations for **493** patients for an estimated **\$449,140** in cost avoidance.

The best clinical outcomes are achieved when patients take medications as prescribed. The pharmacy team gathers data to determine which patients are not adherent to certain medications and contacts providers and/or patients to help resolve issues. To help avoid adherence issues from the get-go, the team is beginning to contact patients when they complete a first fill of a medication that is known to be at risk for non-adherence to counsel on potential issues and follow-up if needed.

The Populytics Care Coordination pharmacy team works closely with the Lehigh Valley Health Network (LVHN) Health Plan to manage plan spending. In addition to the services described above, the team adjusts the formulary to maximize medication value. The team also is piloting a virtual pharmacy review program (ViPRx) for patients with diabetes in certain Lehigh Valley Physician Group practices where a chart review is completed before the patient's appointment and any therapeutic recommendations are sent directly to the provider via the electronic health record, Epic.

To help maximize the value LVHN provides for all patients, the Populytics Care Coordination pharmacy team works on network-wide pharmacy initiatives. The clinical pharmacists are intimately involved in developing ambulatory Epic medication order sets for multiple chronic conditions that include decision support so that primary care providers prescribe the right medication at the right time more consistently. The team also is working on ways to minimize prescribing of high cost, low value medications. These are medications that are relatively expensive with no significant clinical benefit over less expensive alternatives.

Plans for 2021 include expansion. Two new pharmacists will be added to the team, services will reach all LVPHO providers, and we will add video capability and strategies noted above that will be offered to more of the commercial population. Regular data analysis will lead to approach enhancements and additional tactic development with the goal of improving the health of the population and value of care.



COMMUNITY ACTIVITIES

- 50+ Wellness Expo
- Annual LVHN Community Flu Campaign
- Bethlehem Medical Reserve Corps (MRC)
- Big Brothers Big Sisters
- Boy Scout Troop 76
- Holidays of Hope Campaign at Bangor
- Lions Club International (77 pairs of used eyeglasses)
- Lowhill Township Food Pantry (22 turkeys)
- LVHN Pink Out
- Valley Health Partners Street Medicine
- LVH–Cedar Crest Wellness Fair in September 2019
- Phoenix Assistance Dogs of Central PA
- Wreaths Across America

WALKS/RUNS PARTICIPATION

- 2019 Greater Allentown Walk for Children With Apraxia
- Big Chill Rutgers 5K
- Lehigh Valley 2020 Great Strides walk
- Main Street Half Marathon of Hunterdon
- Philadelphia Marathon (supports American Association for Cancer Research)
- Via Marathon Team Relay (Lehigh Valley)
- Walk for Life & 5K

AWARDS/NOMINATIONS

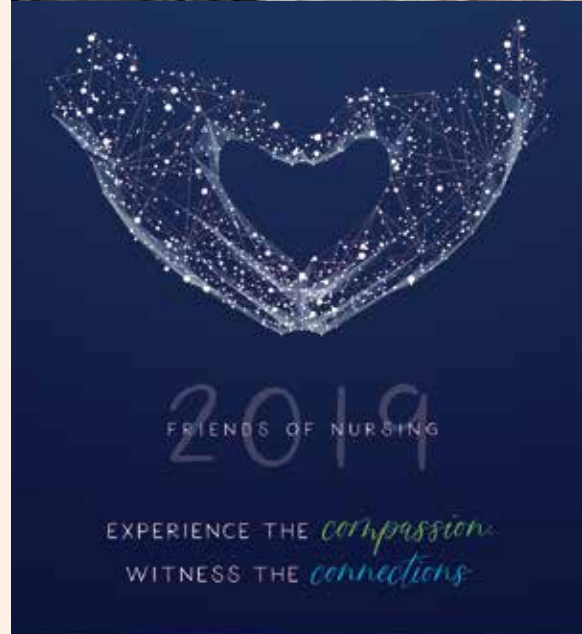
Friends of Nursing Award Jason Laskosky

Friends of Nursing Award Nominees Darlene Bjelobrk
Lauren Madea
Laura Mauro

LVHN Community Service Award Ann Kirka

**PRIDE Award for Empathy,
May 2019** Rex Parker

**PRIDE Award for Empathy,
November 2019** Laura Mauro



"NO ACT OF KINDNESS, NO MATTER HOW SMALL, IS EVER WASTED." — AEGOP



STRATEGIC PLAN FOR FISCAL YEAR 2021

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 HEALTH CARE PROVIDERS AND SYSTEMS (HCAHPS)

- Focus on Improving “Medication Related Scores”
- Continue to implement pilots and impactful pharmacy strategies

COLLEAGUE ENGAGEMENT

- Review Fiscal Year 2020 survey results with colleagues
- Gather ideas to advance the colleague experience
- Develop department action plans around those ideas

STERILE COMPOUNDING

- Stay current with compounding standards
- Identify gaps
- Develop plan to close gaps

LVH-CEDAR CREST EMERGENCY DEPARTMENT EXPANSION

- Open the new Adult Emergency Department
- Deploy medication cabinets and ensure efficient pharmacy workflow
- Establish Emergency Medicine Clinical Specialist within the department.

LEHIGH VALLEY REILLY CHILDREN’S HOSPITAL

- Expand the PICU
- Open a full services pediatric pharmacy with unit dose and clean room capabilities to service the Children’s Hospital

TECHNOLOGY

- Implement Epic’s Dispense Prep IV room workflow technology
- Upgrade Pyxis medication cabinets to Omnicell XT at LVH–Cedar Crest, LVH–Pocono and Coordinated Health
- Continue to implement Kit Check’s automated medication tray and cart management system
- Continue to support B Braun Space Pump integration with monthly drug updates that will be supported by LVHN pharmacists

THERAPEUTICS

- Continue to integrate all hospitals’ formularies into one health-system formulary
- 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

340B PHARMACY OPERATIONS

- Continue to pursue sub-340B pricing agreements
- Continue to pursue 340B-like pricing made available to RRC-designated facilities
- Convert select LVPG practices to hospital-based status
- Review new and existing contract pharmacy relationship to maximize 340B savings
- Follow through on corrective action plans from Alinea 340B program audits

LVH-HAZLETON

- Continue to evaluate providing retail pharmacy services
- Install Stericycle Controlled Substance disposal system
- Install AeroScout temperature monitoring system

LVH-SCHUYLKILL

- Install Stericycle Controlled Substance disposal system
- Install AeroScout temperature monitoring system
- Expand Lehigh Valley Pharmacy Services–Schuylkill to discharge patients
- Upgrade the cleanroom to meet USP 797/800 regulations

LVH-POCONO

- Continue to design the Pocono-West micro hospital
- Install Stericycle Controlled Substance disposal system
- Install AeroScout temperature monitoring system
- Support provision of medication services to Hospice House
- Support expansion of oncology and infusion service line
- Upgrade Pyxis medication cabinets to Omnicell XT

COORDINATED HEALTH

- Epic conversion
- Upgrade Pyxis medication cabinets to Omnicell XT
- Review cleanroom options to meet compounding standards and expand freezer space for antibiotics

LVH-HECKTOWN OAKS

- Continue to work on design to ensure efficient pharmacy workflow
- Prepare for opening in Fiscal Year 2022

SPECIALTY AND RETAIL PHARMACY DIVISION

- Meet and exceed year Specialty Pharmacy Business Plan
- Rebrand to Lehigh Valley Pharmacy Services
- Continue to work on the expansion of Lehigh Valley Pharmacy Services–17th Street
- Implement bedside delivery program in the LVH–Cedar Crest ED

HOME INFUSION DIVISION

- Rebrand to Lehigh Valley Pharmacy Services
- Continue to expand pharmacy infusions required by alternate site of care policies
- Establish Hemophilia Treatment Center 340B support technician
- Continue to negotiate with payers for better rates and expanded access

ALLSPIRE GROUP PURCHASING ORGANIZATION

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

PHARMACY SERVICES STAFF

LOCATION	POSITION	FTE
LVH-Hazleton	Pharmacists	10
	Pharmacy Techs	9.4
		19.4
LVH-Schuylkill	Pharmacists	11.84
	Pharmacy Techs	9.9
	Interns	0.04
	Additional Staff	1
		22.78
LVH-Pocono	Pharmacists	19
	Pharmacy Techs	15
	Interns	3
	Additional Staff	1
		38
LVH-Muhlenberg	Pharmacists	13.35
	Pharmacy Techs	14.54
	Interns	1.15
	Other	3.01
		32.05
MPA	Pharmacists	8.25
	Pharmacy Techs	6.81
		15.06
LVH-Cedar Crest	Pharmacists	56.3
	Pharmacy Techs	50.42
	Interns	3.19
	Other	10
	Other (mgmt.)	5
		124.91

LOCATION	POSITION	FTE
LVPS Retail	Pharmacists	16.42
	Pharmacy Techs	25.91
	Interns	0.1
	Medical Supply Specialists	3.61
	Additional Staff	2
		74.52
LVPS Specialty	Pharmacists	3
	Pharmacy Techs	5
	Additional Staff	1
		9
LVPS Home Infusion	Pharmacists	4
	Pharmacy Techs	2.01
	Nurse Clinicians	2
	Delivery Tech	3.41
	Patient Services Coordinator	2
	Financial Coordinators	2
		15.42
LVPS Billing	Accounts Receivable Specialists	2.01
	Financial Coordinators	2
	Additional Staff	3
		7.01
LVMS	Medical Supplies Specialists	2

PRESENTATIONS/PUBLICATIONS/POSTERS

PUBLICATIONS

Matthew Fair

- Maximizing the Annual Wellness Visit (AWV) – Article for Winter 2020 LVHN ACO newsletter

Peter Huber

- A Comprehensive Safety Profile of tafamidis in patients with transthyretin amyloid polyneuropathy
- P. Huber, A. Flynn, M. Sultan, H. Li, D. Rill, B. Edebe, B. Gundapaneni, J. Schwartz, July 27, 2019

Katelin Kimler

- Spishock S, Meyers R, Robinson CA, Shah P, Siu A, Sturgill M, Kimler K. Observational Study of Drug Formulation Manipulation in Pediatric versus Adult Inpatients. J Patient Saf. 2020 Mar 11. doi: 10.1097/PTS.0000000000000646. Online ahead of print
- Kimler K, McDonald D, Shah P. Treatment of Atopic Dermatitis in Pediatric Patients: Nursing Implications. Pediatric Nursing. 2019;45:215-223,230.
- LVHN CF Newsletters - 3 articles (Trikafta; Drug-Drug Interactions for the CFTR Modulators; Medication Adherence Apps)

PRESENTATIONS

Janine Barnaby

- Four-part series on chemotherapy regimens and supportive drugs to hematology/oncology fellows
- Presented Chemotherapy, Biotherapy and Supportive Medications in the Oncology Core Course for nurses and other clinical staff throughout year

Briana Brown

- Prepared a proposal to pilot a pharmacy-driven Transitions of Care program in collaboration with Lehigh Valley Pharmacy Services at LVH–Muhlenberg – ongoing

Matthew Fair

- Strategies to Reduce Polypharmacy in Older Adults – 2020 Geriatric Trauma conference (February 2020)
- Opioid Prescribing in the Hospital Setting, recurring lecture to incoming medical residents (Summer 2019)

Rachael Gerstein

- A pharmacist's introduction into pediatric oncology, Vizient Pediatric Pharmacy Pearls Webinar Series, June 2020
- Evaluation of wait times for pediatric patients receiving chemotherapy, Pediatric Hematology/Oncology Department, May 2020
- Inpatient Hyperglycemia Learning Lab, family medicine residents, March 2020
- Integrated Medicine in Cardiology Lecture, Wilkes University Nesbitt School of Pharmacy, March 2020
- New FDA Approved Sickle Cell Medications, Pediatric Hematology/Oncology Department, December 2019
- Myasthenia Gravis, pharmacy staff, November 2019
- Antibiotic Learning Lab, Family Medicine Residents, October 2019
- What a Pain! Chronic Pain Management, pharmacy staff, October 2019
- Acute Myeloid Leukemia, pharmacy staff, September 2019
- Pulmonary Rehabilitation Counseling Session for Community Patient Group, September 2019
- Triple Negative Breast Cancer, pharmacy staff, August 2019
- Longitudinal Care Lab Course, Wilkes University Nesbitt School of Pharmacy, August 2019

Jarrold Kile

- Antimicrobial Stewardship and ID updates Internal Medicine Resident's Survival Series LVHN, July 2019
- Capital BlueCross Leapfrog Hospital Survey Regional Collaboration Event Panelist Harrisburg, Pa., November 2019
- Antimicrobial Stewardship and ID updates DeSales Physician Assistant Program Invited Speaker DeSales University, Coopersburg, Pa., June 2020

Jason Laskosky

- Analgesic prescribing in the post-operative setting – presented to LVHN surgical residents Sept. 17, 2019
- Analgesia & Sedation in Mechanically Ventilated COVID-19 Patients – presented to LVHN pulmonary associates – May 14, 2020

Joseph Ottinger

- Anticoagulation Issues in surgery: Perioperative Management, VTE prophylaxis and Reversal Options. Presented to surgical residents of LVHN, Allentown, Pa., July 16, 2019
- Antibiotic Review and Use in Dental Practice. Presented to Dental Clinic residents of LVHN, Allentown, Pa. Aug. 7, 2019
- Pain Management Strategies in Dental Medicine. Presented to the dental residents of LVHN, Allentown, Pa. Aug. 7, 2019
- Transplant Medicine Review. Presented to surgical residents of LVHN. Allentown, Pa. Sept. 3, 2019

Jessica Price

- Long-acting Injectable (LAI) Antipsychotics Presentation to psychiatry residents; LVHN, March 4, 2020
- Safe Provision of Humulin® R U-500 Insulin by KwikPen® Presentation to pharmacists at LVH–Hazleton, LVH–Pocono, and LVH–Schuylkill; LVHN, Dec. 6, 2019
- Side effects of psychiatric medications Presentation to Behavioral Health patients; 7/3/19, 8/2/19, 9/6/19, 10/9/19, 11/6/19

Clarence Walker

- Evaluation on the effectiveness of the modified Raschke heparin protocol in achieving a designated therapeutic target within 24 hours of initiation at Lehigh Valley Health Network, Night of the Residents, June 2020
- Inpatient Hyperglycemia Learning Lab, family medicine residents, March 2020
- Pulmonary Rehabilitation Counseling Session for Community Patient Group, March 2020
- VTE prophylaxis in trauma patients, MHC pharmacy staff, February 2020
- Medication Use Evaluation: vaccinations in patients with asplenia, pharmacy and therapeutics committee, December 2019
- Antibiotic Learning Lab, family medicine residents, October 2019
- In-depth Review of Hyponatremia, pharmacy staff, October 2019
- Top 5 Medications in drug overdose, pharmacy staff, September 2019
- Longitudinal Care Lab Course, Wilkes University Nesbitt School of Pharmacy, August 2019

Kristin Held Wheatley

- Lehigh Valley Reilly Children’s Hospital Antimicrobial Stewardship Program Children’s Hospitals’ Solutions for Patient Safety Antimicrobial Stewardship Pioneer Cohort Hospital Sharing Webinar, July 2019
- Luspatercept-aamt (Reblozyl) – Pediatric Hematology/Oncology, November 2019
- Antivirals, antifungals and antiparasitics – pediatric medical residents PediaPred lecture series, December 2019
- Anticoagulation for Pediatric Patients – Children’s Cancer Center Quality Improvement, April 2020

POSTERS

Rachael Gerstein

- **Gerstein R.**, Mancheril A., Wheatley K.H., Kincaid H., Evaluation of rasburicase utilization for hyperuricemia. American Society of Health-System Pharmacists Midyear Clinical Meeting, Las Vegas, December 2019

Jarrold Kile

- Courtney Landis, Amy Slenker MD, **Jarrold Kile RPh, BCPS**, Luther Rhodes MD. Assessment of the Characteristics of Multidrug Resistant Organisms at Lehigh Valley Health Network: Where do they come from and where do they go? LVHN Research Summer Scholar Program. Allentown, Pa., August 2019
- Olivia Morren, Amy Slenker MD, **Jarrold Kile RPh, BCPS**, Assessment of the Real-world use of Procalcitonin at a Large Academic Institution. LVHN Research Summer Scholar Program. Allentown, Pa., August 2019

Clarence Walker

- **Walker C.**, Kile J., “Medication use evaluation of vaccines in patients with asplenia,” American Society of Health-System Pharmacists Midyear Clinical Meeting and Vizient Pharmacy Consortium Pharmacy Network, Las Vegas, December 2019

Kristin Held Wheatley

- Villalobos-Fry T., Schaffer M., **Wheatley K. H.** Evaluation of the microbiology of intraabdominal abscesses in children and implications for treatment and outcomes. IDWeek 2019 Meeting, Washington D.C., October 2019

- **Wheatley K. H.**, Sterner L., Villalobos-Fry T. Evaluation of antibiotic allergy documentation in pediatric patients. IDWeek 2019 Meeting, Washington D.C. ,October 2019
- Gerstein R.L., Mancheril A., Kincaid H., **Wheatley K. H.** Evaluation of rasburicase utilization for hyperuricemia. American Society of Health-System Pharmacists Midyear Clinical Meeting, Las Vegas, December 2019

JOURNAL CLUB

Rachael Gerstein

- Dapagliflozin in Patients with Heart Failure and Reduced Ejection Fraction, October 2019

Clarence Walker

- Dulaglutide and cardiovascular outcomes in type 2 diabetes (REWIND), September 2019

Home Study/CE modules

Bonny Brownstein, Elizabeth Shober

- Brownstein, Bonny and Shober, Elizabeth, Fluids and Electrolytes in Neonates, a home study CE for LVHN pharmacist staff, Allentown, Pa., released in September 2019.
- Brownstein, Bonny and Shober, Elizabeth, Live CE: Severe Traumatic Brain Injury in Pediatric Patients. Presented to pharmacist staff of LVH–Cedar Crest and LVH–Muhlenberg, Pa., February 2020
- Brownstein, Bonny and Shober, Elizabeth, Severe Traumatic Brain Injury in Pediatric Patients, a home study CE for LVHN pharmacist staff, Allentown, Pa., released, April 2020

Katelin Kimler

- The Root of 65 Roses: CFTR Modulators for Cystic Fibrosis

Joseph Ottinger

- 2019 AIS management guidelines 1.5CE hours
- Transplant Patient Management at LVHN (1.5CE)

PEARLS

Jillian Bankas

- High-dose Ertapenem

Rachael Gerstein

- Treatment of High-Dose Methotrexate Induced Nephrotoxicity, Vizient Pediatric Pearl, February 2020
- High-dose Loperamide in Chemotherapy Induced Diarrhea, Clinical Staff Pharmacists, November 2019

Ann Kirka

- Topical NSAID review

David Kuntz

- Preventing Errors through medication reconciliation

Joseph Ottinger

- Why not rivaroxaban for VTE prophylaxis in medically-ill patients?
- Anticoagulation in Concomitant Chronic Kidney Disease and Atrial Fibrillation and Oral
- Anticoagulation for Patients with Atrial Fibrillation on Long-Term Hemodialysis
- Anticoagulation Management for COVID patients. Included Chart note and Ivent documentation templates

Clarence Walker

- Anticoagulation use in patients with epidurals, Pharmacy Staff, February 2020
- Cefepime induced neurotoxicity, Medical Residents, December 2019
- History of Polio and it's vaccine, pharmacy staff, November 2019
- DOAC use in cancer patients, pharmacy staff, October 2019
- Clinical presentation and treatment of Babesiosis, pharmacy staff, August 2019

Kristin Held Wheatley

- Dinutuximab (Unituxin, ch14.18) – Clinical Staff Pharmacists, July 2019
- Penicillin G Formulations – clinical staff pharmacists, October 2019

