



PHARMACY SERVICES  
ANNUAL REPORT 2021

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## GREETINGS FROM THE VICE PRESIDENT

I am pleased to present the fiscal year 2021 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 and a better colleague experience. Pharmacy Services continues to innovate, providing the highest level of pharmacy service 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 10 million doses, and our Lehigh Valley Health Network (LVHN) harmful error rate was eight errors per million doses dispensed. We provided clinical interventions on **81,410** orders that resulted in safer care and cost reductions of **\$622,288**. Our retail, infusion and specialty divisions continue to grow financially while providing high-quality patient care and customer service. In fiscal year 2021, those divisions generated **\$11 million** in operating income. Additionally, our alignment with the LVHN Health Plan continues to offer significant savings to the network.

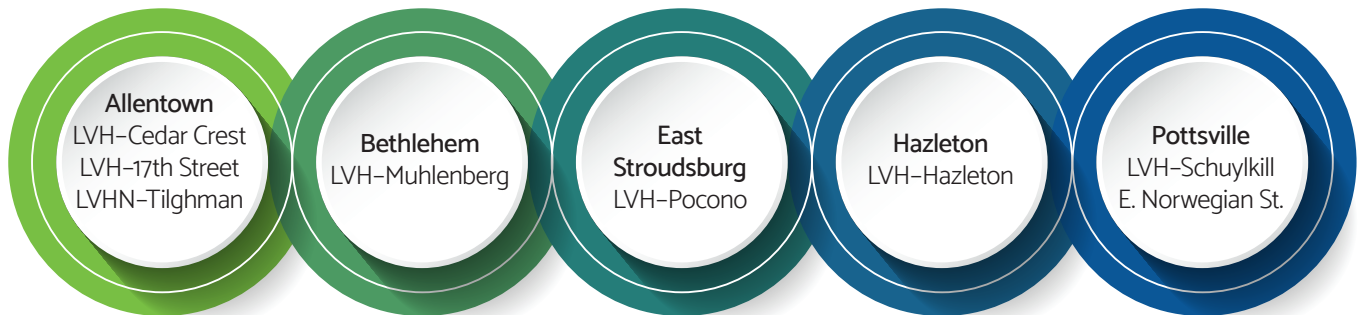
Despite the hardships caused by the COVID-19 pandemic, our team continued to provide world-class pharmacy services while being committed to keeping our patients and each other safe. Throughout the network's five vaccine clinics and multiple mass-vaccination events at Dorney Park and Pocono Raceway, Pharmacy Services helped to facilitate the administration of over **398,000** doses of COVID-19 vaccine between December 2020 and June 2021.

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

Best Regards,  
Brian D. Lenich, RPh, MBA  
Vice President, Pharmacy Services

# LVHN INPATIENT PHARMACY SERVICES

INPATIENT PHARMACIES – ONE AT EACH OF OUR SEVEN HOSPITAL LOCATIONS



## LVHN HOSPITAL LOCATIONS

**Lehigh Valley Hospital (LVH) 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

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

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
- Primary Stroke Center
- Chest Pain Center
- Cardiac Rehabilitation
- Joseph F. McCloskey School of Nursing

### LVH-POCONO

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 2021 STATISTICS

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



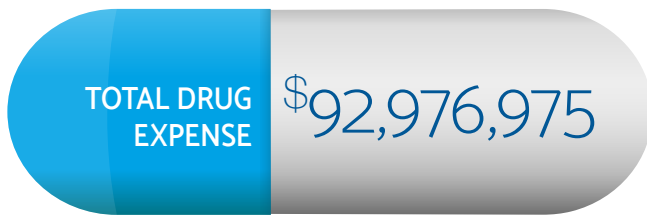
# LEHIGH VALLEY PHARMACY SERVICES LOCATIONS FISCAL YEAR 2021

- 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 2021 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.



## 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 FY21, we added **1** pharmacist and **1** pharmacy coordinator to the specialty division.

## 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 FY21, **170** 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 **\$142 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 **47.98**, with industry average at 68. Retail, which includes home medical equipment (HME), is **45.99**. 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 LOCATIONS

- John and Dorothy Morgan Cancer Center at Lehigh Valley Hospital–Cedar Crest
- Cancer Center at Lehigh Valley Hospital–Muhlenberg
- Health Center at Bangor
- Dale and Frances Hughes Cancer Center at Lehigh Valley Hospital–Pocono
- LVHN Cancer Center–Schuylkill

**The Cancer Outpatient Infusion Centers underwent a big change at the end of the fiscal year.** Our Bangor infusion location closed its doors June 30 after seven years of serving patients. On July 1, Lehigh Valley Hospital–Hecktown Oaks opened, which includes an infusion center that many Bangor patients transitioned to. The infusion centers overall saw growth this past year and have continued to work together to treat our patients.

The Oncology Therapeutics committee continues to have representation from all infusion sites. By having this representation, we can discuss common themes that affect all of us, including drug shortages, site of service, white bagging and reimbursement issues. The committee continues to discuss new therapies and how they will impact the infusion centers as well as inpatient.

Our clinical trial program continues to enroll patients at the following outpatient infusion locations: Cedar Crest, Muhlenberg and Pocono. In FY21, **337** patients were enrolled in both treatment and tissue trials from the National Cancer Institute, pharmaceutical companies and Memorial Sloan Kettering. The alliance with Memorial Sloan Kettering allows our patients to be treated with leading-edge trials while staying in the Lehigh Valley for treatment. Our clinical trial pharmacist was busy this past year with virtual audits, initiation visits and inventory control.

## FY21 INFUSION VISITS BY SITE





# 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 17 preceptors who offer a broad range of learning experiences.

We would like to congratulate our 2021 graduates:

**Alexis Nicholson, PharmD**, clinical pharmacist, integrated care coordination at Lehigh Valley Health Network, Allentown

**Alex Walter, PharmD**, clinical staff pharmacist at Penn Presbyterian Medical Center, Philadelphia

## 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 Nesbitt School of Pharmacy. In the last academic year, 12 clinical specialists and administrators precepted 14 student APPE rotations and 6 student IPPE rotations at 5 inpatient hospital sites. Rotations precepted included critical care, hospital/institutional, infectious diseases, internal medicine, oncology, and pediatrics. Additionally, 21 pharmacy student interns were employed in the inpatient pharmacy departments in FY21. Three of the 5 interns who graduated from pharmacy school entered into a pharmacy residency program.

Lehigh Valley Pharmacy Services employed 12 student interns during FY21.

## 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.

- LVHN Pharmacy Department sponsored 3 ACPE activities accounting for 75 certificates and 8.475 CEU or 84.75 continuing education credit hours for pharmacy staff.
- LVHN Pharmacy Department co-sponsored 3 ACPE activities accounting for 53 certificates and 5.3 CEU or 53 continuing education credit hours for pharmacy staff.

## AWARDS/NOMINATIONS

**Friends of Nursing Award:** Lauren Madea

# 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 members, but they showed their ability to adapt and deliver high-quality results quickly and efficiently.





## INPATIENT TECHNOLOGY

**FY21 was busy with new technology implementations and planning.** A new Epic module, DispensePrep, was fully implemented at LVH–Cedar Crest for both non-sterile oral dose syringes and IV room-prepared sterile products. DispensePrep provides for safer processes in the pharmacy using bar-code scanning and high-resolution image capture in our preparations. At LVH–Cedar Crest, we expanded the use of another Epic module, Compounding and Repackaging (CNR). CNR is not only used for repackaging/unit dose, but also for oral bulk bottle compounding as well as for IV stock syringes. DispensePrep and CNR will be implemented at LVH–Hecktown Oaks in FY22. We also will pilot a new Epic module, Willow Inventory, at LVH–Cedar Crest. Willow Inventory is used to manage the pharmacy medication inventory. It helps keep track of purchasing activity, waste, dispenses, reporting, etc.

The most exciting development in the technology space is the selection of Omnicell as our new vendor for automated dispensing cabinets. In FY21, we began the process of replacing our Pyxis machines with Omnicell cabinets across the network. The process started with patient care areas at LVH–Cedar Crest in January 2021 and finished with the ORs in March. LVHN–Tilghman followed with completion in April, and we ended with 17th Street in May. Our team at Cedar Crest implemented **231** machines at LVH–Cedar Crest, LVHN–Tilghman and LVH–17th Street.

## LEHIGH VALLEY PHARMACY SERVICES TECHNOLOGY

**Lehigh Valley Pharmacy Services continues to use technology**, and answered more than **1.6** million phone calls, submitted **539,422** refills and recorded **117,598** voice messages.



## COVID-19 VACCINATION CLINICS

LVHN began administering COVID-19 vaccinations Dec. 17, 2020. With the help of clinics constructed at each hospital location, over **9,000** doses of vaccine were administered within the first two weeks. From Dec. 17, 2020 through April 9, 2021, over **100,000** doses were administered at our Cedar Crest and Muhlenberg locations before being moved to larger off-site locations in Whitehall and Palmer Township. Throughout FY21, our clinics administered over **315,000** doses of vaccine.

In addition to our local clinic sites, drive-thru vaccine events were held several times in January through May at Dorney Park, Pocono Raceway and Northampton Community College. Our mobile clinic team also traveled to many businesses, nursing homes and schools. All of these events allowed for another **66,000+** doses to be administered to our community.

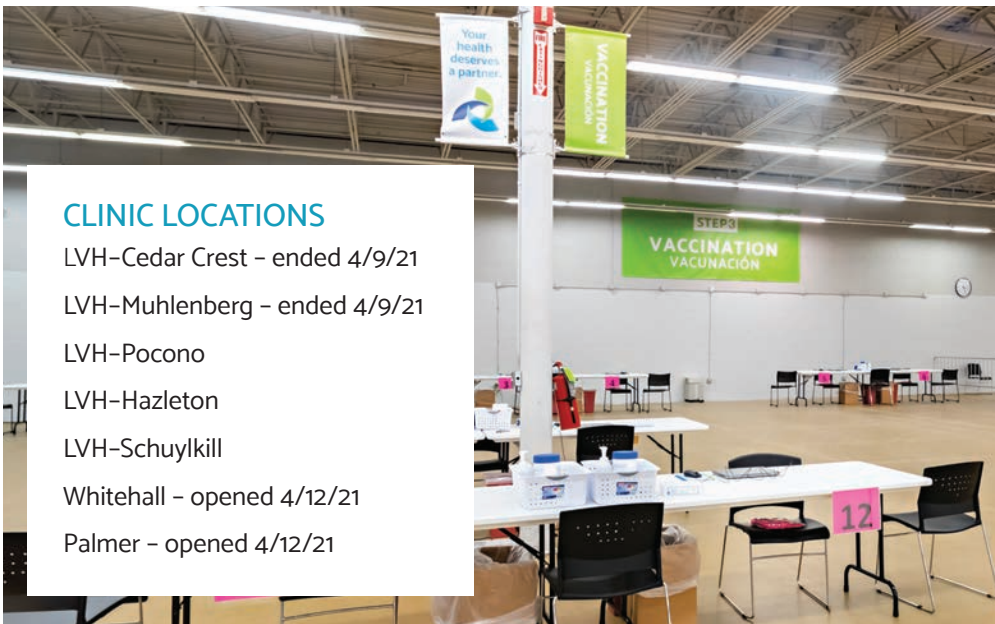
An additional COVID-19 vaccination site opened at Coordinated Health–Emrick on June 4, 2021. This site helped to administer an additional **131** doses through the end of the fiscal year.

Throughout FY21, with the dedication of our pharmacy teams, clinic staff, and colleagues at LVPG and Valley Health Partners, our network administered over **398,000** doses to our employees and communities.

One of the major contributors of our successful vaccination program is our vaccine distribution model. We use a hub-and-spoke model with all vaccine managed centrally at Lehigh Valley Pharmacy Services–Specialty Division. We were able to be agile with sending vaccine to locations based on geographic location and need. Due to our unique model, we were one of the few chosen sites in the country to be visited by the CDC in May 2021. They toured our hub as well as our Whitehall clinic. They commended us in numerous areas and cited many best practices that they shared with other vaccine providers.







**CLINIC LOCATIONS**

- LVH-Cedar Crest - ended 4/9/21
- LVH-Muhlenberg - ended 4/9/21
- LVH-Pocono
- LVH-Hazleton
- LVH-Schuylkill
- Whitehall - opened 4/12/21
- Palmer - opened 4/12/21







## POPULATION HEALTH

**The Populytics Care Coordination (PCC)** pharmacy team spent fiscal year 2021 growing and expanding services for members covered under the Lehigh Valley Physician Hospital Organization (LVPHO) risk-sharing agreements. The PCC team coverage expanded not only by the number of members covered but also in geographic area. Previously, the team only covered primary care practices in the southern portion of our network. This year coverage expanded to all practices covered by the LVPHO, including those associated with our Pocono, Schuylkill, and Hazleton outreach areas. Across all programs, the team made **4,805** interventions for **2,107** patients. This resulted in an estimated cost avoidance of **\$1,754,487** for the fiscal year.

The team continues to work hard on management of our members covered in risk-shared contracts. The team resumed much of the work from last year for members in our Highmark population, including outreach for Medicare Advantage members to complete annual medication reviews and to close care gaps for statin use in patients

with diabetes and cardiovascular disease, and management of women with osteoporosis. In April 2021, the team joined the rest of the PCC colleagues in expanding our services to Highmark Flex Blue and Affordable Care Act (ACA) plan members. The care coordination team provides care management, social work, behavioral health, and pharmacy services for the delegated members of these plans even if they are not attributed to or have a treating relationship with an LVHN provider. The development of a pharmacy wellness program providing annual medication reviews and new medication counseling is also a result of this new program. Work with the LVHN Health Plan (LVHNHP) continues with medication formulary management and other outreach initiatives to help improve the care of colleagues within the network. The team continued the First Fill Counseling program to members who are initiated on medications for cholesterol, diabetes or hypertension to provide medication education. The program has been very well received by members of the Health Plan. Additionally, pharmacists have



continued to review the charts of covered members who have diabetes to make recommendations to their providers through the Virtual Pharmacy Review (ViPRx) program, providing medication-focused chart reviews prior to provider visits. Having pharmacists help manage the LVHNHP medication formulary helps achieve cost savings, which helps to keep plan premiums low while also ensuring members have access to medications that are needed and clinically effective. Formulary rules have helped the health plan to save \$2.6 million over the past fiscal year, including \$150,000 of savings just from newly implemented formulary rules in the past year.

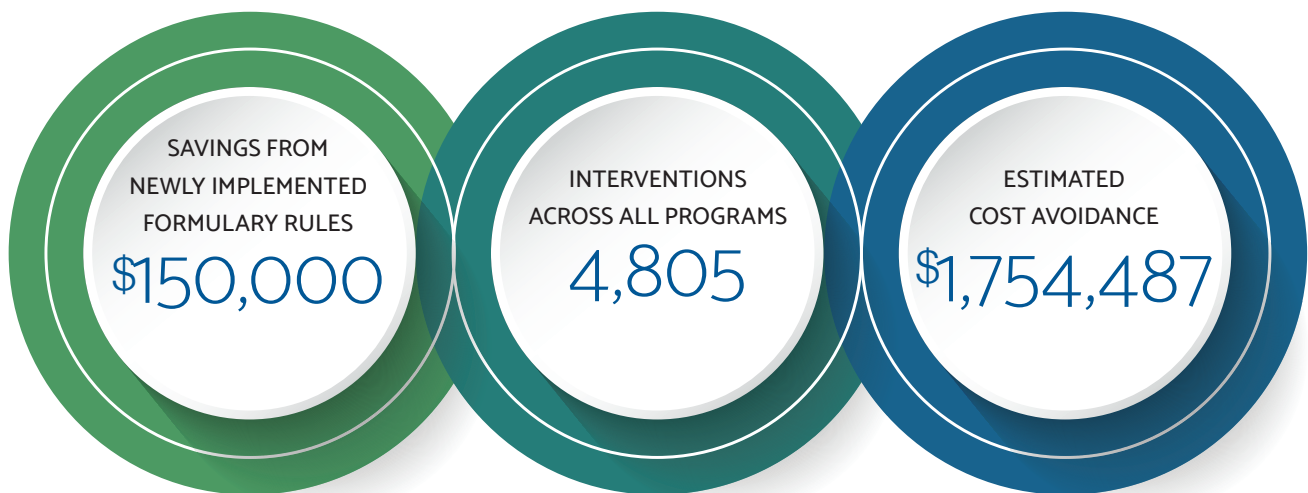
Populytics pharmacists also have worked very closely with the LVPHO to lead the High-Cost Low-Value (HCLV) medication initiative. Multiple interventions have been implemented to decrease the prescribing of these medications including education sessions, providing data to the prescribers, implementing Epic changes to hide some of the HCLV medications, and running a maintenance of certification (MOC) program for providers in the LVPHO.

We have already seen thousands of dollars in cost savings through these interventions and will continue work with the LVPHO with further interventions. Additionally, for the LVPHO, the team continues to perform and expand deprescribing initiatives for diabetes, which help both keep patients on appropriate medication regimens and save payers and members money. Pharmacists have made a total of 71 interventions, which has resulted in savings of approximately \$83,000 for payers and \$10,000 for members over the past year.

Two new pharmacists joined the PCC pharmacy team and were designated to focus on the Capital Blue Cross population with over 12,000 members, including both Medicare Advantage and individual insurance exchange members. Goals for the program include providing better care, lowering costs, and improving quality measures set by HEDIS and STARS. This is being achieved by working on closing statin care gaps as well as addressing medication adherence. The team is also completing medication-focused chart reviews for patients with diabetes, closing care gaps for patients with osteoporosis, and utilizing deprescribing dashboards to optimize drug therapy and reduce medication spending. The pharmacists continue to work on developing a relationship with the clinical and quality teams at Capital Blue Cross.

In addition to payer work, pharmacy team members helped with several network-wide initiatives. Care pathways with decision support for diabetes and heart failure to be used by our outpatient primary care providers were designed with pharmacy team input. The team's piloting of video visit technology will allow for other PCC team members to start video visits as well. Working with our Populytics Analytics colleagues, multiple dashboards were developed to identify those patients requiring outreach. Finally, in conjunction with our Integrated Care Team colleagues, we were able to update and further justify our cost avoidance resources to help accurately calculate our invention outcomes.

More growth will be the plan for the next year as well. Program development and team expansion will continue to support the team's goals of improving the health of the population and value of care provided.



# INTEGRATED CARE COORDINATION – POPULATION HEALTH

The **Integrated Care Coordination (ICC)** clinical pharmacy team continues to provide comprehensive medication management for Medicare, Medicaid, and otherwise vulnerable high-risk patients with frequent hospitalizations or chronic conditions. Additionally, the team provides two PGY1 pharmacy practice residents a longitudinal ambulatory care rotation in population health, which focuses on direct patient care and provider interaction in an interdisciplinary team setting. In fiscal year 2021, ICC clinical pharmacy metrics were collected utilizing a newly implemented automated report that more accurately and efficiently captured the clinical pharmacist interventions documented with each patient encounter. This fiscal year, the ICC clinical pharmacy team received **1,478** referrals from providers, team members and registries; and worked with a total of **1,169** patients. A total of **3,178** patient outreach encounters and video visits were conducted, generating **3,504** interventions for medication management. These interventions were associated with an estimated cost-avoidance of approximately **\$1,330,000**.

The ICC clinical pharmacists embarked on the team's first year to provide medication therapy management (MTM) services for qualifying Gateway Health Plan patients in the network's southern tier. In calendar year 2020, 611 of 687 (**89%**) LVPG and VHP patients received MTM services from clinical pharmacists, achieving a maximum 5 Star Medicare rating.

Another first for this team was the creation and distribution of a quarterly newsletter, Medication Matters. The interactive newsletter provides timely information relevant to health care practitioners across Lehigh Valley Health Network. The



content is focused on clinical practice guidelines, medication safety issues, new drug approvals, and medication recalls, as well as regulatory and practice-based issues.

ICC clinical pharmacists continue to participate in a collaborative drug therapy management agreement with physicians for adult patients with uncontrolled type 2 diabetes in eight family medicine practices. Through this agreement, the clinical pharmacists directly modify drug regimens, order and monitor labs, and refer ancillary services to help patients reach their intended therapy goals. During fiscal year 2021, 124 patients were referred to the program, with 85 of those patients enrolling. Patients had an average A1c of **10.1%** at time of enrollment, and the program successfully demonstrated an average A1c reduction of **2.4%** in managed patients and 2% in the total population. A sub-analysis was conducted to review drug utilization for these patients. In line with the ADA guidelines for the treatment of patients living with diabetes, the team showed success in increased utilization of metformin, GLP-1 receptor agonists, SGLT2 inhibitors, and insulin, and decreased utilization of DPP4 inhibitors, sulfonylureas, alpha-glucosidase inhibitors and meglitinides.

The ICC clinical pharmacists previously worked out of five clinic spaces – Lehigh Valley Pharmacy Services–Cedar Crest, LVHN Express Care–Muhlenberg, Lehigh Valley Health Center at Palmer Township, LVPG Hamilton 3080 medical building, and Lehigh Valley Health Center at Fogelsville – to provide patients with centralized locations, giving increased access to pharmacy services across the Lehigh Valley for face-to-face contact. Also, in FY21, the ICC clinical pharmacists served a sixth location, in a more embedded clinical setting, at LVPG Family Medicine–Southside. As an alternative to face-to-face appointments, virtual interactions via video visits were initiated near the beginning of the COVID-19 pandemic to improve patient access to care.



# STRATEGIC PLAN FOR FISCAL YEAR 2022

## COLLEAGUE ENGAGEMENT

- Review fiscal year 2021 survey results with colleagues
- Gather ideas to advance the colleague experience and execute action plans

## PATIENT EXPERIENCE

- Work with NRC Health to improve every aspect of our health care experience
- Continue to implement pilots and pharmacy strategies impactful to HCAHPS ratings
- Expand and streamline bedside prescription delivery, transitions of care (TOC) offerings, and curbside prescription delivery to Cedar Crest and Muhlenberg campuses

## GROWTH

- LVH–Cedar Crest Children’s Emergency Department and LVH–Cedar Crest Pediatric Pharmacy
- Open LVH–Hecktown Oaks, LVH–Carbon and LVH–Dickson City hospital campuses
- Continue design and planning for LVH–Pocono West
- Continue to work on the expansion of 17th & Chew, pharmacy-based infusions at 2024, and evaluate providing retail pharmacy services at LVH–Hazleton
- Explore new contract pharmacy opportunities and convert select LVPG practices to hospital-based status

## INTEGRATION AND TRANSFORMATION

- Continue to integrate all hospital formularies into one health system formulary
- Prepare for RRC to DSH conversion at LVH–Cedar Crest site
- Utilize AllSpire Pharmacy Clinical Collaborative meetings to continue sharing best practices

## COST SAVINGS

- Continue to drive impactful value-based reductions in over utilization
- Optimization of the 340B program including sub-340B pricing and 340B-like pricing
- Utilize HealthTrust and the AllSpire Pharmacy Collaborative to drive savings

## TECHNOLOGY AND INNOVATION

- Implement Epic’s Dispense Prep IV room workflow technology, Willow inventory system and Omnicell carousels at LVH–Hecktown Oaks and LVH–Dickson City
- Upgrade Pyxis medication cabinets to Omnicell XT at Muhlenberg and Hazleton
- Continue to implement Kit Check’s automated medication tray and cart management system, convert B Braun pumps to ICU Medical and rollout AeroScout at LVH–Pocono, LVH–Hazleton and LVH–Schuylkill
- Convert our Home Infusion Division software system from HomecareNet to Brightree

## COMPLIANCE AND ACCREDITATION

- Stay current with sterile compounding standards, identify gaps and execute plans to close the gaps
- LVH–Schuylkill cleanroom upgrades to meet UPS 797/800 standards
- HRSA audit preparation for LVH–Pocono, LVH–Hazleton and LVH–Schuylkill
- Follow-through on any corrective action plan from 340B program audits
- Begin the ACHC accreditation process for the Specialty Pharmacy Division

# PHARMACY SERVICES STAFF

LOCATION	POSITION	FTE
LVH-Hazleton	Pharmacists	10
	Pharmacy Techs	9.4
		<b>19.4</b>
LVH-Schuylkill	Pharmacists	11.84
	Pharmacy Techs	9.9
	Interns	0.04
	Additional Staff	1
		<b>22.78</b>
LVH-Pocono	Pharmacists	19
	Pharmacy Techs	14
	Interns	2
	Additional Staff	1
		<b>36</b>
LVH-Muhlenberg	Pharmacists	13.35
	Pharmacy Techs	14.54
	Interns	1.15
	Other	3.01
		<b>32.05</b>
MPA	Pharmacists	8.25
	Pharmacy Techs	6.81
		<b>15.06</b>
LVH-Cedar Crest	Pharmacists	56.3
	Pharmacy Techs	50.42
	Interns	3.19
	Other	10
	Other (mgmt.)	5
		<b>124.91</b>

LOCATION	POSITION	FTE
LVPS Retail	Pharmacists	16.42
	Pharmacy Techs	25.91
	Interns	0.1
	Medical Supply Specialists	3.61
	Additional Staff	2
		<b>74.52</b>
LVPS Specialty	Pharmacists	4
	Pharmacy Techs	6
	Additional Staff	1
		<b>11</b>
LVPS Home Infusion	Pharmacists	4
	Pharmacy Techs	2.01
	Nurse Clinicians	2
	Delivery Techs	3.41
	Patient Services Coordinators	2
	Financial Coordinators	2
	<b>15.42</b>	
LVPS Billing	Accounts Receivable Specialists	2.01
	Financial Coordinators	2
	Additional Staff	3
		<b>7.01</b>
LVMS	Medical Supplies Specialists	<b>2</b>

# PRESENTATIONS/PUBLICATIONS/POSTERS

## PUBLICATIONS

### Alexis Nicholson

- Evaluation of Providers' Perceptions on Pharmacists' Medication Safety Interventions – abstract July 2020, full publication in process

### Katelin Kimler

- Shah DD, Kuzmov A, Clausen D, Siu A, Robinson CA, Kimler K, Meyers R, Shah P. Osmolality of commonly used oral medications in the neonatal intensive care unit. *J Pediatr Pharmacol Ther.* 2021;26:172-178.
- 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.* 2021;17:e10-e14.

### James Mauro

- Mauro J, Kannangara S, Peterson J, Livert D, Tuma R. Rigorous Antibiotic Stewardship in the Hospitalized Elderly Population: Saving Lives and Decreasing Cost of Inpatient Care. *JAC – Antimicrobial Resistance.* 2021

## PRESENTATIONS

### Matthew Fair

- Opioid Prescribing in the Hospital Setting. Presented to incoming medical residents (July 2020)

### Joseph Ottinger

- Antibiotic Review and Use in Dental Practice. Presented to the dental residents of the Lehigh Valley Health Network, Virtual, July 29, 2020.
- Pain Management Strategies in Dental Medicine. Presented to the dental residents of the Lehigh Valley Health Network, Virtual, August 19, 2020.

### Kristin Held Wheatley

- Antibiotics Part I. Presented to pediatric medical residents. *PediaPred* lecture series, August 2020.
- Antibiotics Part II. Presented to pediatric medical residents. *PediaPred* lecture series, August 2020.
- Evolution of Handshake Stewardship as part of the Antimicrobial Stewardship Pioneer Cohort. Children's Hospitals' Solutions for Patient Safety Fall 2020 National Learning Series, Virtual. November 2020.

### Alex Walter

- Antibiotic Learning Lab, Family Medicine Residents, October 2020
- Inpatient Antiepileptic Review, Pharmacy Staff, October 2020
- Inpatient Hyperglycemia Learning Lab, Family Medicine Residents, December 2020
- Medication Use Evaluation: Evaluation of enoxaparin hybrid dosing for VTE prophylaxis in COVID-19 positive patients. Therapeutics Committee. December 2020.
- Appropriateness of pre-surgical antibiotic prophylaxis for pediatric procedures, Eastern States Pharmacy Conference, MEPSHP – Night of the Residents, April, May 2021
- LVHN Stroke Symposium: Tenecteplase for Ischemic Stroke Management. LVHN Employees. May 2021
- Vancomycin AUC: Getting Under the Curve. Pharmacy Staff. May 2021

### Alexis Nicholson

- Antimicrobial Stewardship, Family Medicine resident didactic teaching, October 2020
- Early Remdesivir Utilization (May – Oct 2020), COVID Steering Committee presentation, December 2020
- Inpatient Management of Hyperglycemia, Family Medicine resident didactic teaching, January 2021
- Value of Lab Monitoring for Bone Health Medications in the Management of Metastatic Disease & Impact on Patient Care, Eastern States conference, April 2021
- Evaluating Provider Perceptions of Pharmacists' Medication Safety Interventions, ACPE continuing education, June 2021

### Jarrod Kile

- Connecting Care: A Multidisciplinary Panel Discussion on the Use of Neutralizing Monoclonal Antibodies in Ambulatory Patients With COVID-19, Dr. Karen Bloch, MD, MPH, FIDSA, FACP and Jarrod W. Kile RPh., BCPS, ReachMD/Forefront COVID-19 Live Broadcast/CME/CE, February 17th, 2021: 1800-2200
- Implementing a Drive Through Influenza Vaccination Clinic, Jarrod Kile RPh., BCPS and Vincent Lacroce, PharmD., Webex and Pharmacist CE credit, Vizient, September 30, 2020

### Milisha Shah

- Hepatitis C D+/R- kidney transplantation
- CMV prophylaxis updated protocols
- Transplant Nurse Education (for those taking the CCTC exam)

### Jessica Price

- Pharmacy Pearls – Presentation to psychiatry residents; LVHN, September 16, 2020
- Psychiatric Pharmacy Pearls – Presentation to Mid-Eastern Chapter of the Pennsylvania Society of Health-System Pharmacists (MEPSHP); ACPE 1.0 contact hour (0.1 CEU); November 16, 2020

### POSTERS

#### Kristin Held Wheatley

- Gerstein RL, Wheatley KH. Evaluation of wait times for pediatric patients receiving chemotherapy. Children's Oncology Group Fall Meeting, Virtual. September 2020.
- Nicholson A, Barnaby J, Mancheril A, Wheatley KH. Evaluation of restricted medications administered within the inpatient setting. American Society of Health-System Pharmacists Midyear Clinical Meeting, Virtual. December 2020.

#### Alex Walter

- Walter, A. Ottinger J., "Evaluation of enoxaparin hybrid dosing for VTE prophylaxis in COVID-19 positive patients" Vizion 2020 Pharmacy Consortium Pharmacy Network and American Society of Health System Pharmacists Midyear Clinical Meeting, December 2020

#### Alexis Nicholson

- Evaluation of Restricted Medications Administered Within the Inpatient Setting, Vizion Pharmacy Network Meeting, December 2020

#### Jarrold Kile

- The impact of multiplex respiratory pathogen PCR testing at a large academic institution, Hailey Reiss, Jarrod Kile RPh., BCPS, Eric Young MD., LVHN Research Summer Scholar Program; Allentown, PA, August 2020
- Assessment of the Characteristics of Multidrug Resistant Organisms at the Lehigh Valley Health Network: Where do they come from and where do they go? Courtney Landis, Amy Slenker MD, Jarrod Kile RPh., BCPS, Luther Rhodes MD., LVHN Research Summer Scholar Program; Allentown, PA, August 2019
- Assessment of the Real-world use of Procalcitonin at a Large Academic Institution. Olivia Morren, Amy Slenker MD, Jarrod Kile RPh., BCPS, LVHN Research Summer Scholar Program; Allentown, PA, August 2019

### James Mauro

- Mauro J, Kannangara S, Livert D, Tuma R. Optimizing Clinical Outcomes in Geriatric Patients through a Multidisciplinary Hospital Antimicrobial Stewardship Program. IDWeek 2020; Philadelphia, PA.

### JOURNAL CLUB

#### Alex Walter

- Effect of Dapagliflozin on Worsening Heart Failure and Cardiovascular Death in Patients with Heart Failure with and Without Diabetes, July 2020.
- Vericiguat in Patients with Heart Failure and Reduced Ejection Fraction, September 2020.

#### Alexis Nicholson

- Triple Inhaled Therapy at Two Glucocorticoid Doses in Moderate-to-Very-Severe COPD (ETHOS Trial), September 2020

#### Sidney Wilson

- Rivaroxaban with or without Aspirin in Stable Cardiovascular Disease

### CLINICAL PEARLS

#### Alex Walter

- Valproic Acid Review and Management, Medical Residents and students, September 2020.
- Phenobarbital Dosing and Therapeutic Management, Pharmacy Staff and students, October 2020.
- Heparin-Induced Thrombocytopenia Management for Pharmacists, Pharmacy Staff, February 2021.

#### Alexis Nicholson

- Vasoactive Agents in the Management of Acute Variceal Bleeding, pharmacy staff, February 2021

#### Sidney Wilson

- Methadone Pearl

### MISCELLANEOUS

#### Alexis Nicholson

- Longitudinal Care Class Preceptor, Wilkes University Nesbitt School of Pharmacy, August 2020 – May 2021
- Wilkes University Precepting & Learning Teaching Certificate, May 2021



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