

Legacy Pharmacy Services Annual Report

FISCAL YEAR 2023



Legacy Pharmacy Services



Message from Majid Tanas, PharmD, MHA, MS Vice President of Pharmacy and Chief Pharmacy Officer



Majid Tanas, PharmD, MHA, MS,
Vice President of Pharmacy and
Chief Pharmacy Officer

I am pleased to report on the achievements of fiscal year 2023 by Legacy Health's Pharmacy Services. In this annual report, we look forward to highlighting our team's significant accomplishments and the events and initiatives that inspired them.

Our mission to provide safe, sustainable and effective pharmacy services is a core value for all our teammates. The past year was challenging because of the recovery phase of the COVID-19 pandemic. I could not be prouder of our team and how we rose to the challenge. This past year can best be summarized with one word: "Remarkable."

As the health care industry recovers from surges by the COVID-19, RSV and influenza viruses, our team continually leans in. Whenever it has been easy to be discouraged, our team has tackled challenge after challenge. It is this continued commitment to staying the course that makes Legacy's pharmacy team's accomplishments remarkable.

The year ended with Legacy Salmon Creek Medical Center's inaugural hospital survey visit to become an American Society of Health System Pharmacists Certified Center of Excellence. Legacy Salmon Creek is the third organization in the nation to receive this certification status. This achievement highlights the team's quality work and leadership. Legacy Salmon Creek pharmacy also became a Northwest distribution site for banked breast milk. We are incredibly proud of these accomplishments and for continuing to lead pharmacy services in Clark County.

Our team is replacing the aging infrastructure of our automated dispensing cabinets. These dispensing cabinets have been in place for more than 15 years, and Legacy has been working to upgrade its distribution core service and working to create more safety through the application of best practices in dispensing. Whether it is through automated dispensing cabinets or the implementation of an IV room solution, patient safety is the first goal of all these efforts.

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As the health care industry has experienced mounting expenses, our team has identified cost savings for our health system. The team responded by undertaking cost-saving formulary optimization/management, contracting and purchasing opportunities, 340B optimization, specialty and numerous other efforts that have totaled nearly \$8–10 million in a single year. These initiatives will require ongoing maintenance, and we look forward to building on the team's tremendous success.

With this success, we embark on a new direction for Legacy as we work to expand the high quality of care to patients at home. We are working with great fervor toward establishing the ability to meet patients where they are. We could not have been happier with our service to patients in our hospitals as we launched our Meds-to-Beds and medication history programs across the system. While much of the community has seen a decrease in prescription service levels, our outpatient team has continued to evolve and find ways to deliver prescriptions with speed (within 30 minutes on average) and a personal touch. We are on the verge of a fascinating direction that we hope to share with you next year. Stay tuned!

We will continue with our regulatory focus because regulation is borne out of patient safety. This past year, we optimized our utilization of technologies, such as Simplifi and Bluesight. Recognized by auditors, our compliance team has taken a rigorous approach toward improving the safety of patients and our employees. Despite a particularly challenging year, our team continues to rise to the challenges of day-to-day operations.

We aim for a bright future where Legacy, a Portland gem, will serve in new and exciting ways. We will soon launch critical services as a commitment to continued clinical and financial success for our community and beyond.

With respect,
Majid

A Message from Michelle

After a successful 35-year career at Legacy Health, Michelle Murray, RPh, BCPS, Director of Clinical Services and PGY1 Residency Director, will be retiring.

As I look back on a 35-year career at Legacy Health, I look at the changes in the health care environment, the changes in Legacy, the growth in our pharmacy service and the opportunities ahead.

I am often asked when I talk to potential Legacy employees, "Why Legacy?" Or "Why do you like working for Legacy?" For me, the answer has always been easy: It is our mission and our people. Our mission and dedication to helping our community has always resonated with me but the people I work with are the reason I have stayed with Legacy for my entire career. I have been lucky to get to know pharmacy staff across the system and have enjoyed getting to know them as people — their families, their travels, what brings them joy outside of work.

I have been extremely fortunate to have started Legacy's residency program in 2001 and privileged to be part of the growth and learning of more than 60 pharmacists in their residency training. Many of these past residents are now valuable Legacy team members in our ICUs, emergency departments, ambulatory clinics and general medicine units throughout the system.

I've felt fortunate to practice pharmacy in a state and for an employer that is progressive and supportive of pharmacists practicing at the top of their license. I worked for a time in one of Legacy's ambulatory clinics caring for heart failure patients as we began providing ambulatory pharmacy services. I saw the growth of our anticoagulation clinics across the system, and again was able to help in the implementation and support of a new service provided by pharmacy. I was also part of the preparation and implementation of the renal

transplant program when it came to Legacy Good Samaritan Medical Center in 1999. I've observed pharmacists become an integral member of teams across the system — in patient care rounds and on quality improvement projects and committees. And towards the end of my career, I've seen a worldwide pandemic that again necessitated change and innovation. This pandemic also allowed me to see pharmacists unite with other health care providers to vaccinate our community, our patients and our people — thus bringing home Legacy's mission once again!

Pharmacy and health care, in general, have become more complex and regulated. We have standards around compounding of sterile and non-sterile products that have necessitated staff education and expensive pharmacy remodels. We have an opioid epidemic that necessitated a controlled substance diversion program and guidelines and resources for patients with opioid use disorder. The last ten years, we've

seen an increased shortage of critical medications that have required our pharmacy team to partner with stakeholders on detection and mitigation strategies. I hope the future will provide a health care environment with fewer drug shortages and a slowdown in inflation of drug costs.

As I look to the future, I see the need for continued innovation and exploration of how both pharmacists and pharmacy technicians can practice at the top of their licensure. I did not envision seeing another shortage of pharmacists but with decreasing enrollment in pharmacy schools, we are seeing statistics that a pharmacist shortage will be an issue soon and is already being realized in some settings. I see health care continuing to be pushed from the acute care setting to the ambulatory setting, and we need to ensure that we have pharmacists who are trained



Michelle Murray, RPh, BCPS, Director of Clinical Services and PGY1 Residency Director

to care for patients in the ambulatory settings. I envision residency training programs as a way to train more pharmacists for these expanded patient care roles. I see market innovators/disrupters changing how medications are provided to patients with companies such as Amazon and Mark Cuban's Cost Plus Drug companies. My final hope is that the individuals who practice pharmacy never lose sight of our professional mission to serve our patients and improve/optimize our patient's medication therapy.

Legacy Pharmacy Services Core Beliefs, Vision and Mission

Our Why

To strengthen, unify and innovate the way we care for one another and our world.

Our Vision

Be Engaged

Provide the safest medication therapy and to empower patients for better health.

Be Connected

Care for one another. Be vital to our community and world.

Be Innovative

Invest in activities that make Legacy Pharmacy Services essential.

Be a Leader

Be a market leader and practice excellence.

Our Mission

Our mission is to provide safe, sustainable and effective pharmacy services that promote health and healing.

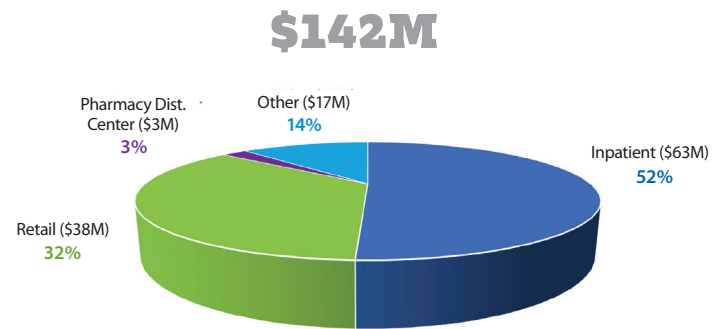
Legacy Pharmacy Services

BY THE NUMBERS

Pharmacy Services Team

246	Pharmacists
50	Board-certified pharmacists
23	Pharmacy interns
199	Technicians
2	Administrative staff
5	Residents PGY1
2	Residents PGY2
3,760	Hours of student training FY22
94	Rotations
40	Unique students

Pharmaceutical purchases FY22



Publications and presentations

4	Peer-reviewed publications
12	Platform or poster presentations

Pharmaceuticals

2.2M	Items processed by distribution center
7,623,650	Doses dispensed per year
11,095	Orders verified per day
4,189	Compassionate care scripts
254,337	Prescriptions filled in apothecaries
14,070	Medication histories completed on patients admitted to hospital from ED
26,998	Meds-to-Beds patients served
20,881	Pharmacist visits in LMG clinics

Hospital bed capacity

1,267	Average hospital beds staffed FY22
969	Average census

Legacy Health

HOSPITAL LOCATIONS



Legacy Emanuel Medical Center



Legacy Salmon Creek Medical Center



Legacy Good Samaritan Medical Center



Randall Children's Hospital at Legacy Emanuel



Legacy Meridian Park Medical Center



Legacy Mount Hood Medical Center



Legacy Silverton Medical Center



Unity Center for Behavioral Health

Legacy Emanuel Medical Center, Randall Children’s Hospital and Unity Center for Behavior Health Inpatient Pharmacies

Pharmacy services at Legacy Emanuel Medical Center, Randall Children’s Hospital at Legacy Emanuel and Unity Center for Behavioral Health provide comprehensive pharmaceutical services to some of the most complex patients in the Portland area. This includes patients suffering the highest levels of physical and psychological trauma, burn injuries and congenital diseases. The team of 133 pharmacy professionals are committed to ensuring patients receive the right medication for the right reason and are empowered to advocate for their own health. Pharmacists are integrated into all areas of intensive care (neurotrauma, cardiovascular, burn, pediatric, neonatal), emergency department, internal medicine and psychiatric teams.

Strategic changes

The best possible medication history resources were deployed across the three hospitals with resounding success. In less than one year, the medication history team executed standard work across the hospitals. This ensured greater than 83% (greater than 95% at Legacy Emanuel) of patients had their best possible medication history documented within 24 hours of admission.

Impact

Legacy Emanuel patients with documented best possible medication history:

- January 2022: 23%
- January 2023: 95%
- Reduction of FY23 vs. FY22 year-over-year patient drug costs by \$2.2 million.
- Legacy Emanuel inpatient pharmacists completed 22,000 Tier 1 protocols in FY23.
- Legacy Emanuel inpatient pharmacists completed 2,600 Tier 2 (therapeutic interchange, IV to PO and renal dosing) protocols in FY23.

Pharmacy staff report	
Legacy Emanuel, Randall Children’s, Unity Center	
Pharmacists	58
Board-certified pharmacists	26
Pharmacy residents	2
Technicians	45
Interns	8
Peer-reviewed journal articles by staff in the past year	1
Presentations by staff at conferences in the past year	2

- Randall Children’s Hospital inpatient pharmacists completed 3,700 Tier 1 protocols in FY23.
- Randall Children’s Hospital inpatient pharmacists completed 1,100 Tier 2 (therapeutic interchange, IV to PO and renal dosing) protocols in FY23.
- Unity Center inpatient pharmacists completed 54 Tier 1 protocols in FY23.
- Unity Center inpatient pharmacists completed 152 Tier 2 (therapeutic interchange, IV to PO and renal dosing) protocols in FY23.

Looking ahead

Deployment of Legacy Operating System Tier 1.2 huddle to facilitate collective problem solving. This will leverage the shared expertise of our frontline caregivers.

Deployment of pharmacists to multiple disciplinary inpatient throughput huddle to facilitate safe and accelerated patient discharges.

Legacy Good Samaritan Inpatient Pharmacy

Legacy Good Samaritan Medical Center is a 230-bed acute care hospital located in the heart of Northwest Portland. The campus includes the Legacy Devers Eye Institute, which receives patients from around the world; an award-winning donor recovery center; and the Legacy Rehabilitation Institute of Oregon. Additional specialties include oncology and gender care services.

Last year, a complex discharge unit opened in response to the growing complexity around the care coordination process for our patients. Our pharmacists are decentralized and play an integral role in each of the specialized areas. This is in addition to the core services of critical care, medical-surgical, perioperative and emergency medicine.

To better meet the community’s needs, hazardous drug chemotherapy services for hospitalized oncology patients were enhanced. The department also expanded training programs, redesigned workflow and built out new sterile hazardous and non-hazardous drug compounding suites.

Impact

- Completed a “best possible med history” with 93% of patients admitted.
- Our inpatient pharmacists completed a global review on 78% of inpatients.
 - 100% of critically ill patients were assessed daily.
 - 98% of step-down and medicine unit patients were reviewed daily.
- Inpatient pharmacists completed 11,000 Tier 1 protocols in FY23.
- Inpatient pharmacists completed 5,400 Tier 2 (therapeutic interchange, IV to PO, and renal dosing) protocols in FY23.

Pharmacy staff report	
Legacy Good Samaritan Medical Center	
Pharmacists	35
Board-certified pharmacists	13
Pharmacy resident	1
Technicians	25
Interns	4
Peer-reviewed journal articles by staff in the past year	1
Presentations by staff at conferences in the past year	1

Other recognitions or certifications: Two of our pharmacists received ASHP ED Certification. One of our transitions of care technicians received the ASHP Medication Reconciliation Certificate of Achievement.

Achievements

- Collaborated with providers to achieve best practice standards for admission medication reconciliation.
- EPIC’s Dispense Prep & Check rolled out in February of 2022, intending to meet a goal of utilization for 95% of doses. The team met the goal by using 96% of total dispenses of bulk, extemporaneous and IV compounded items.

Looking ahead

- The buildout of new IV compounding suites, including the incorporation of image capture technology and expansion of sterile compounding capabilities, will be completed to meet the growing needs of the community.



Left to right: Jacky Ngo, Jenelle Stinson, Aleks Korenkov, Jena Jobin



Central pharmacy huddle, left to right: Jay Howard, Mia Kim, Erin Croft, Christine So, Lisa Kojiro, Jenn Montebianco, Kelly Tolbert, Brandy Balabin

Legacy Meridian Park Inpatient Pharmacy

Legacy Meridian Park Pharmacy Services provides the following comprehensive services:

- Clinical and distributive services for hospitalized patients.
- An apothecary pharmacy for employee and patient discharge medications.
- Meds-to-Beds for discharged patients.
- Medication management services clinic that provides anticoagulation management and other clinical outpatient services.
- Centralized pharmacy distribution center (CPDC) that repackages oral medications for all Legacy Health sites.

Throughout all services, the team strives to do what is best for our patients while fostering a family atmosphere. Our team is focused, collaborative and proud of the way patients are served.

Legacy Meridian Park expanded its Meds-to-Beds program with the addition of a dedicated pharmacist and technician in May of 2022. That addition has allowed patients to obtain discharge medications filled at our apothecary and then delivered to their rooms before they leave. Patient satisfaction with the service has been high and has helped patients maintain their medications without interruption. The Meds-to-Beds pharmacist attends biweekly discharge rounds and makes an impact on patient discharge planning and prescriptions.

Impact

On the first Friday of every month the team celebrates with a special “kudos” time of recognition, which



The Legacy Meridian Park pharmacy family

Pharmacy staff report	
Legacy Meridian Park Medical Center	
Pharmacists	24
Board-certified pharmacists	6
Pharmacy resident	1
Technicians	19
Interns	2
Peer-reviewed journal articles by staff in the past year	1
Presentations by staff at conferences in the past year	1

along with birthdays and sharing snacks in the break room, promotes fun and camaraderie at work.

Prescription volume at our apothecary has been increasing, thanks to the Meds-to-Beds program. From a volume of about 600 in May 2022, the first three months of 2023 had volumes of 1,030–1,129.

Prescription capture with Meds-to-Beds has increased from 5% in April of 2022 to a peak of 29%.

- Inpatient pharmacists completed 6,200 Tier 1 protocols in FY23.
- Inpatient pharmacists completed 1,700 Tier 2 (therapeutic interchange, IV to PO and renal dosing) protocols in FY23.

Highlights

The Centralized Pharmacy Distribution Center (CPDC) is on the Legacy Meridian Park campus. CPDC repackages oral liquid and solid unit dose medications for all Legacy Health sites. It also adds barcodes to items and helps make Emergency Department Take Home Packs. In 2022, the CPDC processed 2,264,182 products!

- Tabs/capsules repacked: 1,937,000
- Oral syringes filled: 62,774
- Oral unit dose cups filled: 29,818
- Unit doses tabs/caps with MILT: 9,570
- Take-home packs prepared: 3,518
- Labels/bar codes added to products: 220,958

Looking ahead

- Legacy Meridian Park will be the first site to pilot a new Automated Peritoneal Dialysis system.
- Image-capture technology will be implemented in the IV suite.

Legacy Mount Hood Inpatient Pharmacy

Legacy Mount Hood’s pharmacy team is composed of more than 40 pharmacists and pharmacy technicians. The team provides care across multiple practice settings, including inpatient, retail and outpatient medication management services clinic. Pharmacists and pharmacy technicians work together at the top of their respective licenses to provide comprehensive pharmaceutical services to the entire East Portland area, which includes East Multnomah County and a vast number of surrounding and nearby rural communities.

Strategic changes

One of Legacy Health’s strategic initiatives was the expansion of Meds-to-Beds services and medication history collection across all Legacy sites. With Meds-to-Beds service already in place at Legacy Mount Hood, implementing medication history collection to facilitate accurate and timely medication reconciliation upon admission became a primary focus. While the program has only been in place for several months, feedback from pharmacists and providers has been positive. The team looks forward to continuing to grow this program in the coming year.

Impact

- More than 700,000 doses were dispensed for admitted and emergency department patients.
- More than 1,100 orders verified per day.
- More than 23,000 prescriptions filled in apothecary.
- Inpatient pharmacists completed 5,600 Tier 1 protocols in FY23.
- Inpatient pharmacists completed 3,200 Tier 2 (therapeutic interchange, IV to PO and renal dosing) rotocols in FY23.

Pharmacy staff report	
Legacy Mount Hood Inpatient Pharmacy	
Pharmacists	23
Board-certified pharmacists	10
Pharmacy resident	1
Technicians	13
Interns	2

Achievements

In response to organizational growth, an inpatient pharmacy operations manager was integrated into the pharmacy leadership structure to provide greater departmental oversight and support to the team.

A pharmacy-led medication reconciliation program was implemented. This included hiring a full-time medication history technician and developing a standard operating pattern for the technician and pharmacists involved.

To accommodate the upcoming inpatient pharmacy remodel project, a new high-density shelving system was installed, ensuring sufficient space for drug inventory.

Looking ahead

An inpatient pharmacy remodel project is on the horizon, including new clean room suites, to ensure compliance with USP 795, 797 and 800.

Initiatives to increase outpatient prescription capture from both the hospital and clinics are underway.

Legacy Salmon Creek Inpatient Pharmacy

Built in 2005, Legacy Salmon Creek Medical Center (LSCMC) offers a range of innovations to improve the health and life of residents in Clark and Cowlitz counties of Southwest Washington. With a spacious lobby livened with piano music and an espresso bar, Legacy Salmon Creek is known for its warm atmosphere and for meeting the needs of patients and families.

Pharmacy services at Legacy Salmon Creek includes inpatient pharmacy, an apothecary retail pharmacy, medication management service and two-day treatment unit/infusion clinics. The team of more than 70 employees is committed to providing expert, patient-centered services across the continuum of care.

Strategic changes

Throughout FY23, the Legacy Salmon Creek inpatient pharmacy team tested several enhancements to the IV admixture product preparation process in collaboration with the pharmacy systems team. The work includes reviewing all alerts captured in the Dispense Prep System, developing consensus on workflow changes, coordinating the update of adult and pediatric IV admixture tables, and validating a Power BI report. A team continues to meet and make changes toward all compounded IV product preparations being managed through Epic Dispense Prep/Check and image capture. After publishing a manual and a series of tip sheets, each site in the system is adopting the Dispense Prep/Check standard work and progress is tracked through the Dispense Suite Dashboard.

Impact

- 97% of all LSCMC inpatients receive Global Patient Review daily by a pharmacist. Global Patient Review utilizes a prioritization scale in Epic to highlight the most complicated patients for comprehensive daily review, freeing up valuable pharmacist time to screen all inpatients throughout the day.

Pharmacy staff report	
Legacy Salmon Creek Inpatient Pharmacy	
Pharmacists	35
Board-certified pharmacists	14
Pharmacy resident	1
Technicians	37
Interns	5
Presentations by staff at conferences in the past year	3

Other recognitions or certifications: ASHP Certified Center of Excellence in Medication-Use Safety and Pharmacy Practice

- 97% of all IV products are dispensed, prepped and checked before administration to patients, capturing the safety of barcode scanning for the right products and an active order in the preparation process.
- Inpatient pharmacists completed 12,000 Tier 1 protocols in FY23.
- Inpatient pharmacists completed 3,900 Tier 2 (therapeutic interchange, IV to PO and renal dosing) protocols in FY23.

Achievements

In January 2023, pharmacy services was certified as a Center of Excellence in Medication Use Safety and Pharmacy Practice by American Society of Health-System Pharmacists. Legacy Salmon Creek is the first non-academic hospital with fewer than 600 beds recognized with this honor.

In September 2022, our apothecary joined Northwest Mother's Milk Bank to open the first human donor milk distribution site for families in Southwest Washington.

Looking ahead

Phase 4 of the IV Room Remodel will be completed in the first quarter of FY24, finalizing a project that started in late 2019.

Legacy Salmon Creek will adopt an inpatient inventory management system with the new automated dispensing cabinet hardware.

The Legacy Salmon Creek pharmacy managed medication reconciliation program based in the emergency department is adapting and adopting Legacy's standard work for medication histories.

Legacy Silverton Medical Center Inpatient Pharmacy

Pharmacy services at Legacy Silverton Medical Center is a progressive team that serves a rural hospital population in the heart of Oregon's Willamette Valley. The team comprises 12 pharmacists and eight technicians and provides pharmacy services to patients in both ambulatory and inpatient settings at Legacy Silverton. In addition, one pharmacist and two technicians provide outpatient services at the Woodburn Health Center Pharmacy.

Strategic changes

The implementation of Controlled Substance Manager (CSM) at Silverton has enhanced pharmacy compliance with our system diversion prevention program. CSM provides a "closed loop" system, with full reconciliation of all receiving/dispensing/handling of controlled substances both within the pharmacy as well as between the pharmacy and automated dispensing cabinets in patient care areas. Previously, the pharmacy at Legacy Silverton tracked controlled substances in the pharmacy manually. The CSM is expected to improve accuracy, assist with inventory management and bring much needed efficiency.

Achievements

- Implemented pharmacy-led medication reconciliation in October 2022 with 0.6 tech FTE (full-time equivalent) coverage.
- Began remodel of the inpatient pharmacy, with Phase 1 completed by January 2023.
- Onboarded a new director of pharmacy and pharmacy clinical coordinator.
- Inpatient pharmacists completed 744 Tier 1 protocols in FY23.
- Inpatient pharmacists completed 817 Tier 2 (therapeutic interchange, IV to PO and renal dosing) protocols in FY23.

Pharmacy staff report	
Legacy Silverton Inpatient Pharmacy	
Pharmacists	12
Board-certified pharmacists	3
Technicians	8

Looking ahead

- Implementation of central pharmacy manager system for inventory management.
- Pursuing capital funding for an outpatient pharmacy in Silverton.
- Expansion of days/hours covered for medication reconciliation.



Left to right: Shawn Pasco, Melody Carroll, Cammy Sullivan, Lorraine Taylor, Catherine Wangari

Ambulatory Care

Legacy Medical Group-Based Pharmacy Services

Clinic-based pharmacy services provide a layer of medication support and safety to the Legacy Medical Group (LMG) primary care clinic sites. The pharmacists function as physician extenders under collaborative practice agreements to help patients use their medications safely and achieve wellness goals. Pharmacy technicians embedded in these sites support refill and prior authorization workflows — thereby improving turnaround time.

The LMG pharmacy team also provides oversight of medication rooms and support for patient enrollment in medication assistance programs. In 2022, pharmacist time expanded at several clinic sites, along with increased technician time, to help with greater workload in covered clinics. Additionally, collaborative agreements were expanded, most notably to assist with outpatient treatment of COVID-19 infections.

Recent achievements

Pharmacists are embedded in 22 primary care clinics and utilize 14 collaborative practice agreements for patient management. The team saw year-over-year growth in volume and continued to demonstrate positive clinical impact through A1c reduction.

Medication technicians provided refill and prior authorization support in 40 clinics, processing most of the 486,400 refills and 10,400 prior authorization requests for the year.

The medication assistance program helped 745 patients this year, with 835 prescriptions worth a total of more than \$3.6 million in benefit.

Pharmacy staff report	
Legacy Medical Group Pharmacy Services	
Pharmacists	17
Board-certified pharmacists	13
Pacific University faculty	1
Pharmacy residents (PGY2)	2
Technicians	35
Interns	2
Peer-reviewed journal articles by staff in the past year	2
Presentations by staff at conferences in the past year	4
Diabetes care and education certifications	7

Other recognitions or certifications: CME series, 3 CEUs offered via 12 presentations

In January 2022, the pharmacist team began receiving referrals for management of COVID-19, totaling 4,336 referrals for the year.

After positive review in 2021, the ambulatory pharmacy team moved forward with its continuing medical education series for primary care providers. It offered three CEU credits available from 12 presentations throughout the year.

An inaugural annual provider satisfaction survey demonstrated robust physician support for ambulatory pharmacist services. Of survey respondents, 100% agreed or strongly agreed that ambulatory care pharmacists provide a positive impact to the health status of patients and are valuable members of the primary care team.

Looking ahead

The pharmacist team will be branching out into LMG specialty clinics with an embedded pharmacist in Legacy Medical Group–Endocrinology.

Medication Management Services

Medication Management Services (MMS) offers pharmacist services, like those provided by the clinic-based pharmacists at Legacy Medical Group (LMG). However, its model enhances accessibility for patients in the wider Legacy Health Partners (LHP) provider community. These hospital outpatient departments provide a way to optimize management for a wider array of drug therapies that benefit both providers and their patients. MMS departments serve as clinical care sites for patients who require specific specialty pharmacy medications, such as those used to treat hepatitis C. Prescriptions qualify for the 340B discount program; savings increases the ability to reinvest money into tangible services that help vulnerable patient populations. Specialty pharmacy was successfully integrated within MMS clinics, bringing that care model further aligned with Legacy Health standards and improving access to 340B savings. Improvement was also made in patient outreach for medication adherence and safety.

Looking ahead

MMS will collaborate more closely with OptionCare, the home health infusion partner, to improve the care experience for both patients and referring providers.

MMS will continue to partner with Legacy Population Health and LMG to improve Centers for Medicare and Medicaid Services star ratings; financial sustainability; and greater LHP provider satisfaction from having access to Legacy clinical pharmacy services.

Pharmacy staff report	
Medical Management	
Sites	5
Pharmacists	25
Board-certified pharmacotherapy specialists	5
Board-certified cardiology pharmacists	2
Board-certified ambulatory care pharmacist	1
Support staff	3

Clinical outcomes		
	MMS	Published benchmark
Total number of patient encounters	16,536	NA
Percentage of INRs in goal range	61.2%	55–64%
Clotting events per 100 patient years	2.8	11.8 for usual care, 3.3 for other anticoagulation clinics
Major bleeding events per 100 patient years	1.0	3.9 for usual care, 1.6 for other anticoagulation clinics

Legacy Pharmacy Medication History Services and Meds-to-Beds Program

Description of services

The Meds-to-Beds (M2B) program and medication history services focus on closing gaps in care transition opportunities when patients go home from the hospital.

The M2B program provides a way for patients to leave the hospital with essential medications in hand. Patients value the convenience of having their discharge prescriptions filled in the Legacy Health apothecary and delivered to the room. A pharmacist also provides medication counseling at bedside. Patients who completed the M2B experience survey indicated they understood why they were taking the meds prescribed for them (91%), any possible side effects (91%) and were satisfied or very satisfied with the service (96%).

The pharmacy medication history program supports Legacy's goal of being the safest place to deliver and receive care. Pharmacy-driven medication histories prevent patient harm by obtaining an accurate medication history from the patient and making the best possible medication list available to the prescriber for informed clinical decisions. Highly trained medication history technicians follow standard job instructions and are the backbone of the program.

Recent achievements

- Deployed medication history operating pattern at seven of eight Legacy inpatient sites. Achieved a significant increase in percentage of medication histories completed on in-scope patients from 40% to 62%.
- Deployed M2B operating pattern fully at three of seven sites.
- Achieved a significant increase in M2B orders dispensed (from an average of 1,800 to 2,921 per month) and total number of all discharge orders dispensed by the apothecaries (from 5,152 to 6,071 per month).

14,070 Number of medication histories completed on patients admitted to the hospital from the ED in 2022

26,998 Number of prescriptions dispensed through Meds-to-Beds in 2022

- Adopted standard training practices to spread a standard operating pattern for both M2B and medication history programs at all sites.
- Legacy Emanuel Medical Center successfully deployed M2B training at its site to share learnings and train other teams and enable them to quickly adopt and adapt the operating pattern at their sites.

Looking ahead

- Deploy the medication history operating pattern at one remaining site in 2023.
- Ensure that every patient who goes home from a Legacy hospital has the choice to leave with medication in hand.
- Legacy Silverton Medical Center close-door pharmacy provides a way for patients receiving high-risk oral anticoagulants to leave with medication in hand, with indication for use and side effects known and understood by the patient.



Left to right: Victor Tran, Laura Cortez-Andrade, Brandon Allen, Lisa Owens, Marlon Broussard, Jason Smith

Population Health Pharmacy Services

Legacy Health population health pharmacists are members of the Care Support Resource (CSR) Team, which also consists of health coaches and nurse case managers. The CSR program adds a layer of support for patients that stratify into the program to help them manage their conditions and medications, adopt healthier lifestyles, and find social services, if needed. Additionally, our population health pharmacists contribute to various initiatives that improve clinical and quality outcomes for Legacy's covered lives.

Recent achievements

- Focused on health care effectiveness data and information star (HEDIS) measures to improve health plan ratings. The team piloted processes for managing payer reported lists centered around medication adherence.
- Enhanced utilization of guideline-directed medication therapy across Legacy Medical Group (LMG) clinics. The team piloted a process to identify patients with type 2 diabetes that would be candidates for guideline-directed medication therapy with the goal of improving patient care while also reducing total cost of care.

CSR program

- 154 patients are currently stratified and participating in the program.
- Reduction in average A1c from 8.51% to 7.2% for patients graduating from the program.
- Per member per month (PMPM) cost reduction of 7.73% for patients graduated from the program.

Pharmacy staff report

Population Health Pharmacy Services	
Pharmacists (one vacancy)	4
Board-certified pharmacists	2
Peer-reviewed journal articles by staff in the past year	1
Presentations by staff at conferences in the past year	2

HEDIS measures

- 32% increase of patients with controlled blood pressure.
- 10% increase in statin use in cardiovascular disease (SPC) measure.
- 14% increase in statin use in diabetes (SUPD) measure.

Looking ahead

- Enhanced support of HEDIS measures for LMG clinics to improve quality metrics that are centered around medication utilization.
- Continuation of prospective identification of patients across Legacy's ambulatory clinics that would benefit from initiation of guideline-directed medication therapy. This work aims to improve patient care and reduce the total cost of care.

Legacy Health Pharmacy Compliance Team

This team of 10 people includes a pharmacy director of compliance, manager, coordinators, medication safety officer and five medication safety and compliance technicians. The service line is dedicated to supporting pharmacy leaders and the organization to achieve and maintain compliance with pharmacy regulations that ensure employee and patient safety. This work assists in streamlining processes, helps ensure completion of mandatory regulatory requirements and fosters continuous quality improvement.

Recent achievements

- Implemented Controlled Substances Diversion Program, including standard work for monitoring and investigating outliers.
- Implemented system USP 800 Hazardous Drug Program.
- Created and implemented Personnel Monitoring Program.
- Completed semi-annual sterile product competency testing for 320 total.
- Maintained Environmental Monitoring Program (established October of 2021).
- Completed more than 100 site visits for compounding area inspections and surface sampling.

Pharmacy staff report	
System Support — Pharmacy Compliance	
Pharmacists	1
Board-certified pharmacist	1
Pharmacy technicians	8

- Led and oversaw cleanroom construction projects for USP 797, 800 compliances at four sites.
- Rolled out CriticalPoint training program for USP 795, 797.
- Maintained Sterile Hazardous Drug Compounding Training Program.
- Assisted in successful inspections by the Joint Commission and Board of Pharmacy.
- Co-led conversion and implementation of Dispense Suite.
- Established IV Standards guidelines and participated in updating 50 compounding records (MFRs, prep instructions).
- Collaborated with pharmacy operations owners on updating Adult and Pediatric IV Standards.

Looking ahead

- Implementation of Omnicell automatic dispensing cabinets across the enterprise.
- Formation of systemwide diversion prevention steering committee.

Medication Safety

Medication safety promotes quality patient care by collaborating with multidisciplinary stakeholders to improve the safety of the medication use process for the protection of all Legacy Health patients. The medication safety officer and medication safety committee advocate for transparency and a culture of safety through initiatives driven by patient safety reports and best practices from national safety organizations.

Recent achievements

- Pharmacy resident completion of gap analysis for three ISMP Targeted Medication Safety Best Practice standards.
- Standardization of stocked compatible luer-lock syringe brands for use with Alaris Syringe Modules and Spiros closed-system devices.
- System transition to EnFit enteral tubes and compatible syringes.
- Revision in standard frequency of Pediatric/NICU IV infusion sets and filter changes.
- Development of an Epic High-Risk Psychiatric Medication List that encourages appropriate monitoring.
- Reintroduction of carpuject holders with emphasis of safety benefits from appropriate utilization of ready-to-administer devices.
- Creation of best practice education for heparin drip setup on Alaris pumps.
- Evaluation of independent dual verification workflow for high-alert medications at Legacy.

Pharmacy staff report	
Medication Safety	
Pharmacists	1
Board-certified pharmacist	1

Looking ahead

- The medication safety officer will continue to support ICARE reporting for the Diversion Prevention Team.
- Barcode medication administration will be optimized, after assessing barriers.

Clinical Systems

The pharmacy clinical team is supported by a Director of Clinical Services, six clinical managers at the hospital site level and four clinical coordinators. System clinical coordinators provide support for formulary management and optimization, inpatient infectious disease treatment and project management. The multidisciplinary High Value Care Committee started a pilot for dalbavancin to facilitate discharge of patients with bone and joint infections. This resulted in the approval of a new pharmacy clinical coordinator position focused on outpatient parenteral antimicrobial therapy (OPAT) with the goal of improving patient throughput. This pilot demonstrated a savings of 678 patient days.

Accomplishments

- Developed and updated multiple guidelines such as: thrombolytic therapy for massive and submassive pulmonary embolism treatment, parenteral nutrition use, discharge opioid prescribing and opioid use disorder treatment.
- Clinical staff managed 300 shortages and developed mitigation strategies, including restriction criteria and clinical protocols for about 50 shortages.

- Reviewed 31 drugs/drug classes and 14 clinical initiatives through the Pharmacy and Therapeutics (P&T) Committee. Implemented clinical initiatives such as fixed dose KCentra for life threatening anticoagulation-related bleeding.
- Initiated antimicrobial stewardship projects such as a practice change to include indications on antibiotic orders, an antiretroviral stewardship pilot and a review of the anti-infective formulary with P&T.

Looking ahead

- Refine the process for comprehensive clinical pharmacy reviews (global patient review).
- Pursue additional antimicrobial stewardship opportunities, such as reducing unnecessary treatment of asymptomatic bacteriuria, improving C. diff testing, launching the OPAT program and implementing a penicillin desensitization protocol.
- Standardize transitions of care services and target high-risk patient populations for Meds-to-Beds services.



Michelle's team, left to right: Emily Shephard, Pam White, Michelle Murray, Melanie Geer, Hita Bhagat, Tom Towers

Clinical managers, left to right: Kyle Kojiro, Sandy Hammer, Nate Mah, Michelle Murray, Catherine Wangari, Jerusha Taylor, Ellen Smith, Emily Shephard



Legacy Pharmacy Systems Team

This team of 11 pharmacy team members includes a manager, two Willow-certified pharmacists, one Willow-certified technician and seven pharmacy technician analysts. The team provides centralized support and oversight for the following areas:

- Cost and charge integrity.
- Data analytics and reporting.
- Electronic Health Record (HER) medication order build and formulary maintenance.
- Automated dispensing system and infusion pump library maintenance.
- Pharmaceutical purchasing.
- 340B program.

Recent achievements

- Implemented use of Alert Space to manage and monitor dose and drug-drug interaction alerts.
- Implemented use of new cost update tool that was developed internally. This has streamlined and improved the cost update process.
- Completed conversion of all Microsoft Access tools to Power BI, which has streamlined and standardized several auditing workflows.
- Implemented new age-based rules to improve dosing defaults in the EHR for pediatric patients.

- Supported deployment of EHR dispense/prep check standard work across the system.
- Released multiple reports for monitoring pharmacy performance: Dispense Prep/Check, Immunizations, Inpatient Workload Statistics, Medication History, Meds-to-Beds and Specialty Pharmacy.
- Underwent an external audit of the 340B program with only minor findings.
- Implemented use of an automated 340B retail audit tool that was developed internally and supports auditing 100% of claims.
- Implemented Medicaid carve in to optimize potential for 340B savings.

Looking ahead

- Plan to analyze drug-drug interaction data trends to minimize nuisance alerts.
- Plan to identify additional opportunities for medication savings through purchasing analytics.
- Continue to support automated dispensing system and central inventory technology upgrades.
- Support multiple outpatient growth initiatives.

Pharmacy Residency Programs

Legacy Pharmacy Services has three postgraduate residency programs accredited by the American Society of Health-System Pharmacists (ASHP). The PGY1 program was established in 2001 and has 60 graduates. There are 20 graduates from PGY2 programs, specializing in ambulatory care and infectious disease.

Thirty-two former PGY1 and eight PGY2 residents are employed across the Legacy Health system.

The PGY1 program is a multisite program with six residents employed at medical centers. Within the past year, the PGY1 residents will have completed more than 9,000 hours of clinical training and 1,200 clinical staffing hours, demonstrating a commitment to excellent education and patient care.

All PGY1 residents presented a poster at ASHP's Midyear Clinical Meeting and Exhibition in Las Vegas in December and will finish the year presenting their year-long longitudinal project at Northwestern States Residency Conference in May.

In the past, residents have placed nationally in American College of Clinical Pharmacy's Ambulatory Care Virtual Poster Symposium and have also published in the Journal of the American College of Clinical Pharmacy.

Legacy also has a PGY2 program in infectious diseases. This program has existed since 2018, was accredited in 2019, and employs one resident each year. Residents train with our infectious diseases,

microbiology and antimicrobial stewardship teams.

Finally, Legacy has a PGY2 program in ambulatory care. This program employs two residents who specialize in ambulatory care and rotate through our many LMG internal medicine and specialty clinics. This program has existed since 2017 and was accredited in 2018.

Both the PGY1 and PGY2 residency programs have demonstrated a real commitment to diversity, equity and inclusion initiatives to ensure they continue to foster a culturally competent, inclusive and safe space for potential candidates and current residents.

As for what is next, our residency programs are preparing for the upcoming residency year and the (unscheduled) residency accreditation visit.

In addition, the PGY2 ambulatory residency program is looking to implement an early commitment process for residents. Additional leadership training is planned for residency preceptors.



Residents and Michelle, left to right: Kelly Royster, Elizabeth Pickels, Monica Rogoz, Michelle Murray, Emilee Huey, Laikana Ly, Annie Hiller



Left to right: Laikana Ly, Elizabeth Pickels, Michelle Murray, Emilee Huey, Monica Rogoz



PGY1 and PGY2 residents at 2022 ASHP Midyear Clinical Meeting and Exhibition, left to right: Kelly Royster, Bryce Ashby, Elizabeth Pickels, Annie Hiller, Emilee Huey, Laikana Ly, Monica Rogoz

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Legacy Pharmacy Services

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