Annual Report

22

23

UCDAVIS HEALTH

Department of Pharmacy Services





A Message from Chad Hatfield, **Chief Pharmacy Officer**

It is my distinct pleasure to present our Fiscal Year 2023 Pharmacy Annual Report for University Of California Davis Health. This annual highlights the exceptional work that UC Davis staff has accomplished and the successful initiatives that transform the quality of pharmaceutical care for our patients. These exceptional accomplishments are detailed in the report under the respective service areas and program categories.

This year has found us coming out of the grasp of clinical s ervi c es and building upon

I encourage you to take some time to read through the FY23 annual report and celebrate accomplishments of our department and peers. We will continue to be challenged this year to deliver on the values of UC Davis Health, but together we shall succeed. I would like to thank each and every member of the staff for their commitment to the profession and dedication to the care of UC Davis patients.

COVID and into a new reality of healthcare of which once again our staff have excelled at. The staff continue to ensure we deliver care as if each one of our patients is our very own family member. This year we continue to grow the pharmacy enterprise with many new operational construction projects that will help our patients gain better access to care. Outside of facility projects, we have further enhanced our foundations, while ensuring we remain fiscally viable as an organization.

Chad Hatfield PharmD, MHA, **BCPS Chief Pharmacy Officer**





VISION

Providing patient-centered, proactive, and innovative pharmaceutical care.

STRATETIC PLLARS

Clinical Services
Operational Excellences
People
Financial Stability

MISSION

Provide the highest quality and most cost-effective pharm aceutical care in an environment that fosters efficient patient-focused care, education, and research.

VALUES

Kindness Trust Inclusion



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Ambulatory Care Clinical Services

Acute Care Clinical Services

Provide care to adult patients on medical and surgical units throughout the hospital including, general medicine, women's health, hospital medicine, neurology, trauma, orthopedics, neurosurgery and more. Pharmacists hold board certifications in multiple specialties (BCPS, BCGP, AAHIVP, BCIDP, CDCES, BCADM) and provide representation among various committees (UC Transition of Care Collaborative, Pharmacy Research Oversight Committee, Clinical Practice Council, Antimicrobial Stewardship Committee, Pain and Sedation Committee, NICHE committee). Pharmacists provide order verification, comprehensive monitoring, and participation in multidisciplinary care & discharge rounds in support of health system initiatives.

Internal Medicine and Surgery

pharmacist driven medication optimization protocols

peer-reviewed publications

UCDH Research Preceptor of the Year

UCSF Preceptor of the Year

developed discharge medication reconciliation initiative









Critical Care

The critical care pharmacy team provides clinical and operational support for a range of patient populations. Team initiatives included VTE chemoprophylaxis (trauma), bivalirudin dosing/monitoring standardization, fixed-dose Kcentra, operationalized MAR-based insulin calculator, and supported launch of new liver transplant service.





25 Committees: 5 Nationally; 20 UCDH



14th Residency Class for PGY-2 Critical Care



8 Awards: 2 Nationally, 3 UCDH, 3 UCSF



11 Peer-Reviewed Publications



5 National Presentations



9 Board Certified Critical Care Pharmacists

Pediatrics

The Children's Hospital Pharmacy Team supports the 121 bed Children's Hospital which includes:

- o 24-bed pediatric & cardiac ICU
- 49-bed level four neonatal ICU
- Children's Surgery Center
- Pediatric Emergency Department

Subspecialties include:

- Anticoagulation
- Antimicrobial stewardship
- Oncology/chemotherapy
- o Parenteral nutrition.

The pharmacists participate in multidisciplinary rounds, optimizing medication therapy for neonatal/pediatric patients



Guidelines,
Policies, Procedures
Developed and Reviewed

15
Institutional
Committees

Departmental Committees

10
Order Sets Built and Optimized

6

at Pharmacy & Therapeutics Committee

Monographs presented

Quality Improvement Highlights

- Bolus from Pump
- Pediatric Pulmonary Hypertension
- Palliative Care
- Opioid Stewardship
- Comfort Commitment
- Oncology Direct Admits



Emergency Medicine (EM)

The Emergency Medicine Pharmacy team is comprised of highly committed, residency trained pharmacists providing care to both pediatric and adult patients. They enjoy collaborating with medical and nursing staff and colleagues to optimize medication use among a high-risk, vulnerable patient population. Many of our staff members have dual appointments including UCSF School of Pharmacy and UC Davis School of Medicine and actively seek out opportunities to give back to the profession.



282
antibiotic adjustments via the Culture Callback Program

2 resident research awards

4 UCDH Nursing Excellence Awards

14
EMR ordersets/order panels reviewed and adjusted

5
manuscripts reviewed for
Annals of EM

139

discharge prescription adjustments via the Prescription Clarification Program

173 state-funded naloxone kits dispensed



Infectious Disease (ID)

ID pharmacists provide patients with personalized, optimal medication therapy with respect to pharmacokinetics, pharmacodynamics, spectrum of activity, feasibility, evidence-based medicine, and cost. The ID team also serves as advisors and educators to the health system's pharmacists, physicians, other multidisciplinary healthcare professionals, and learners. They provide focused educational experiences to pharmacy interns, PGY1 & PGY2 pharmacy residents, including PGY2 residents specializing in ID. The team's pharmacists maintain stringent control over the antimicrobial formulary, review new agents, create, and update ID-related institutional guidelines and policies.

PGY2 - trained Infectious

100% Diseases Pharmacists. 3 with
BCIDP Certification

80.1% OPAT cases requiring ID pharmacist intervention patients (833)

1,560 Patients cared for on ID consult service

>90% Intervention acceptance rate

antimicrobial
administration ratio
(SAAR) national
benchmark maintained)

Standardized

1 of 163 IDSA center of excellence

Antimicrobial stewardship OPOPAT cost savings through early discharge & central line avoidance hospital days (127)

(127) central lines (8)

\$1.4M



Cardiology

The Cardiology Pharmacy team is responsible for the daily rounding and pharmacotherapeutic services of seven medical and surgical services caring for patients in critical care and acute care areas. Cardiology pharmacists have been instrumental in optimizing medication therapy for patients with various cardiac conditions. Over the past year the team has played a vital role in improving the cardiovascular well-being of our patients through a range of initiatives and achievement.



Current Services

- Cardiac Surgery
- Thoracic Surgery
- Pulmonary & Critical Care Consult
- Acute Care Cardiology -Gold
- Acute Care Cardiology -Platinum
- Advanced Heart Failure & Left Ventricular Assist Device
- Vascular Surgery
- Pulmonary Hypertension

Expanded Services & Process Improvements

- Left Ventricular Assist Device Clinic
- Pulmonary Hypertension Service support
- LVAD & Heart Transplant Selection Committee
- Heparin Order Panel
- Bivalirudin Order Panel
- New Start Dofetilide Order Panel
- Bicarbonate Purge Solution for Impella Device
- Antibiotic Dosing Guide in ECLS

Professional Development

- 3 Dept of Pharmacy Committees (CPC, PRAC, PROC)
- 1 UCOP SIG
 Anticoagulation
- 9 Pharmacotherapy Board Certifications (BCPS, BCCP, CNSC)
- 9 Volunteer Clinical Faculty Positions

Behavioral Health (BH)

Since the initiation of the Behavioral Health Pharmacy team in August 2021, the team has expanded patient care services in both acute and ambulatory care settings. Dedicated pharmacists collaborated closely with interdisciplinary teams to tailor treatment plans and optimize medication regimens, resulting in improved patient outcomes.



Expansion of service to 6 days per week in acute care setting



Three publications in peer reviewed journals



Development of ambulatory care clinic with direct patient care services 4 days per week



Attended over 160 Behavioral Escalation Support Team interventions per year resulting in patient deescalations, reduced AMA discharges, and improved patient quality of care

Growth of Clinical Service

- Psychiatry Consult Liaison
- Emergency Psychiatry Services
- Outpatient Adult Psychiatry
- Outpatient Child Psychiatry
- MIND Institute

Professional Committees Involvement

- PROC, PEDC, DEI, Psychiatry CQI, MIND CQI, AAPP Committees
- Expansion of pharmacy residency learning experience to both acute and ambulatory experience



Inpatient Oncology

The Inpatient oncology team consists of 8 clinical pharmacists, including 7 Board-Certified Oncology Pharmacists (BCOPs). Additionally, the team comprises 8 pharmacy technicians and 4 Post-Graduate Year 2 (PGY2) oncology pharmacy residents. These dedicated professionals collaborate closely with other healthcare providers to ensure the optimal use of medications for patients receiving cancer treatment within the hospital, clinics, and infusion service areas.

The oncology team's responsibilities encompass a wide range of critical tasks. They actively participate in the development and maintenance of Computerized Physician Order Entry (CPOE) order sets specific to oncology. Furthermore, they rigorously evaluate new medications for potential inclusion in the hospital's formulary, a crucial aspect of ensuring the availability of cutting-edge treatments. In addition, the team plays a pivotal role in promoting guidelines aimed at promoting cost-effective and evidence-based cancer treatments.

Moreover, the oncology pharmacy team excels in the realm of medication management for cancer patients. Their expertise is instrumental in the safe and effective administration of medications vital to patients' well-being throughout the course of their treatment.









Inpatient Oncology Services

- Inpatient Hematology/Oncology
- Stem Cell Transplant (SCT)
- Gynecologic Oncology
- Hospital (AIM) Infusion
- 1361 inpatient admissions
- 134,002 verified inpatient orders
- 12905 AIM Infusion orders
- 10461 hazardous CSPs
- 118 inpatient cell therapy procedures
- 172 SCT procedures

Infusion Pharmacy

Infusion pharmacists are an integral part of the inter-professional teams providing care to adult and pediatric patients with cancer at UC Davis Health. Infusion pharmacy services are supported by 18 clinical pharmacists (10 BCOPs) and 13 technicians, The pharmacists work collaboratively with other health care providers to optimize drug therapy for patients undergoing cancer treatment in clinics and infusion service areas. The infusion pharmacists develop and maintain Beacon order sets, review new medications for formulary consideration, create guidelines for cost-effective, evidence-based treatment, and facilitate medication management for patients undergoing cancer treatment.









Infusion Pharmacy Services

- UC Davis Comprehensive Cancer Center
- Adult and Pediatric Infusion services
- Placer Center for Health Infusion
- 139,163 patient visits
- 125,764 verified med orders
- 45,193 Infusion visits
- 67,359 CSPs
- 29,010 hazardous CSPs
- Charge for single-use vial waste program implemented: ~\$5 million revenue generated
- Vial Use Reduction -Dose Rounding program implemented: ~\$2 million in cost-savings

Investigational Drugs Services (IDS)

The UC Davis IDS Pharmacy team provides oversight and distribution of investigational products for all UC Davis Health and UC Davis Comprehensive Cancer Center Clinical Trials involving the administration of investigational drugs. The team is comprised of 6 highly skilled pharmacy technicians and 9 clinical pharmacist.

DS Pharmacy Services

- Develop protocol-specific order templates and EMR drug entries
- Participate in protocol development by writing/reviewing the drug information content.
- Coordinate the procurement and dispensing of investigational and study-provided commercial agents
- Perform subject randomization/treatment assignment
- Provide education/training to pharmacy staff and study team members related to the investigational agents.
- Assess concomitant medication for trial eligibility and/or drug-interactions
- Participate in sponsor monitoring and regulatory audit.



106Opened
Protocols



108 Closed



360 Active Protocols



~5000 Doses of IDS product dispenses



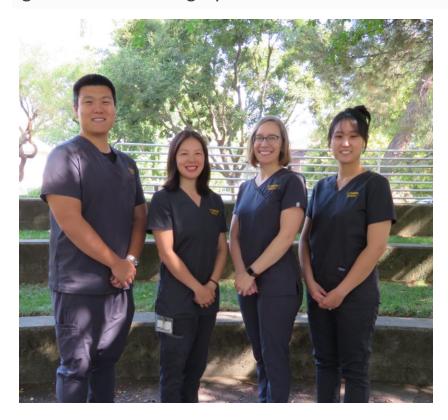


Major Accomplishments in FY23

- Graduated the 1st PGY-2 IDR Pharmacy Resident; the first PGY-2 IDSR program on the West Coast!
- Served as the highest enrolling site for SRP-9001 (delandistrogene moxeparvovec), the first FDA-approved gene therapy treatment for Duchenne's Muscular Dystrophy.
- Participated as an instructor in the CTSC Clinical Research Foundation Training program.
- IDS pharmacy renovations included new flooring, new furniture and reconfiguration of workspace.
- Development and maintenance of CPOE for complex investigational regimens. Build 150 new Beacon Protocols in FY 22-23.

Nutrition

Nutrition Support Pharmacists provide parenteral nutrition services for admitted adult patients and primary service line coverage for colorectal surgery, bariatric surgery, and gastrointestinal surgery.



5,738 total PN orders

417 PN pharmacist consults

138 discharge PNs facilitated 4 board certified pharmacists

UCDH Committee Involvement

- Inpatient Clinical Practice Council
- Nutrition Subcommittee
- Pharmacy and Therapeutics
- Drug Shortages
- Employee Wellness

Professional Involvement

- ASPEN23 meeting attendance
- ASPEN Education & Professional Development committee member
- ASPEN
 Clinical Practice Committee

 member
- ASPEN Conference
 Monitoring and Advisory Panel

Opioid Stewardship & Pain Consult

The Opioid Stewardship Program (OSP) provides focused efforts to optimize patient care related to opioid use throughout the continuum of care. The opioid stewardship pharmacist plays a key role in the surveillance of inpatient opioid use, review and development of institutional policies, education of patients and care team members, analysis of reported patient safety events, and representation on multidisciplinary committees for pain management, substance use disorder, and opioid safety.

The Pain Consult Service provides focused assessment and recommendations to care teams on multi-modal management of pain for hospitalized patients. The team's individualized pain management regimens mitigate adverse events, optimize non-opioid and opioid therapies, and ensure the achievement of functional pain management goals.



Opioid Care Honor Roll – UC Davis Health Achieves Highest Rating: Superior Performance

UCDH recognized for implementing advanced, innovative opioid stewardship strategies across multiple service lines, consistently achieving the highest level of performance, as well as actively measuring and monitoring performance for the purpose of continued quality improvement.

22

2

Service Expansion: Substance Use Intervention Team (SUIT)



Policy Development, Revision, and Review



Daily Safety Net Surveillance

Committee Representation

11

Grand Rounds Precepted

2

Research and NIH Grant Applications



EMR Enhancements

Interprofessional Education Presentations

29

Med Use Safety, Policy, & Quality Assurance

The Medication Safety, Medication Policy, and Medication Security teams are focused on continuously improving the safe and optimal use of medications at University of California, Davis Health. Our team's goal is to use standards set forth by key regulatory agencies to impact change on a system-level and reduce the risk of harm to our patients.





Policies and guidelines reviewed

215

Medication Management surveys completed

1854

Med Safety continuing education hours provided

29

Formulary evaluations and drug class reviews completed

161

Drug waste avoided

\$553,366

Good Catches awarded to pharmacy staff for preventing medication errors

51

Medications added/removed from formulary

89/16

Medication cold storage assets monitored

152

Pump library changes completed

98

Diversion, Automation, Informatics, and Analytics

Our team is dedicated to using data and technology to enhance the medication use system. Significant milestones continue to be achieved and we remain committed to pioneering solutions that empower patient care and improve operational excellence by enhancing efficiency, accuracy, and data-driven decisions at UCDH.



System Implementations

Carousel

Developing Best Practices Professional Leadership



4.4M ADC Dispenses

16% increase in automated dispensing cabinets (ADC) utilization



Compounding and Repackaging

Central pharmacy modernization

Expansion into nonsterile compounding services

Integration of medication reconciliation



Pyxis Performance

- 89% of eligible adult med dispenses
- 7,000 PAR adjustments
- 0.57% stockout



10,000+ ControlCheck Reconciliations

Controlled substance incidents reviewed



Asana

DrFirst

Streamlining task management

and adherence into EMR



New Data Sources

Developed and validated with Pharmacy Domain Specific Unit (DSU)



25 New Pyxis Devices

13% increase in pyxis machines



Tableau Dashboards

Analytics support for clinical, financial services

National Appointment

Ryan Cello, ASHP Director-at-Large Section of Pharmacy Informatics & Technology

Presentations

- Epic eXpert Group Meeting (XGM) 2023
- Vizient Pharmacy Network 2022
- ASHP Midyear Clinical Meeting 2022





Publications

- Formulary management guiding principles for automated systems
- Advancing Medication Safety Through Technology Innovations

Vizient Pharmacy Vision Awards



Mark A. Johnson Excellence in Pharmacy **Analytics**

Acute Care Operations

The Acute Care Operations Pharmacy team is a fundamental component of the patient care we provide across the institution. Our team of ~90 pharmacy technicians and ~35 pharmacists service all inpatient areas, several mixed-use areas (ED/OR), and select ambulatory/outpatient clinics across the health system. The continued vision of our team includes strategizing the introduction of state-of-the-art technology in our IV room(s) / nonsterile compounding areas, Pharmacy remodels, Ambulatory Surgery Center expansions, and other EPIC enhancements to improve workflow, quality, and patient safety.





High Value Pharmacy Enterprise Gap Closures

- Two carousels implemented in Central Pharmacy August 2022 that moved the needle to ~90% gap closure. 6th Floor Pediatric Satellite Carousel implemented September 2023
- CIVA PLX Implementation Project aligned all inpatient areas to be fully integrated onto Pharmalogistics (PLX) which allows for transparency of current on hand drug inventory and fiscal accountability of inventory

Pharmacy Revenue and Accountability

- One-time inventory adjustment based on 5-day min/10-day max using average daily utilization over 6 months. Total Max Reduction = \$280,859
- Conversion from 503B Norepinephrine to Baxter Norepinephrine: Anticipated savings: ~\$100,000

Operational Optimizations

• There has been a decrease in turnaround time for central pharmacy from ~2.5 hours to ~1 hour over the course of 2023.

Central Pharmacy Renovations

Central pharmacy is currently in the beginning phases of a multi-year renovation project that will happen
in several phases throughout the entirety of the space. Once completed, it will feature a third carousel, a
more streamlined central workspace, an updated non-sterile compounding area, a larger staff
breakroom, a hazardous drug holding room for contingency planning and an additional set of
administrative offices for new hires / project days

Perioperative Services (OR) Pharmacy Team

The Perioperative Pharmacy team currently includes 9 pharmacists and 8 technicians. The perioperative space operates as a mixed-use area servicing inpatients and outpatients. The OR team is responsible for covering the Main Hospital OR areas, ambulatory surgery centers, Pre-Op Clinic (PAC Clinic) and various procedural areas which can provide services to >250 patients on a normal operating day.

FY23 M ajor Accomplishments:

- The OR team effectively expanded to include decentralized clinical pharmacists working in the University Tower Surgery Suites PACU and in the Pavilion Surgery Center PACU.
- •The team expanded into the Ambulatory Care space to include a pharmacist at the Pre-Anesthesia (PAC) Clinic in the ACC Building supporting nurse practitioners



The Medication Error Reduction Committee awarded one of our OR Pharmacists the Medication Safety Catch of the Year 2023!!



10 board certifications across the team in pharmacotherapy (6), critical care (2), and geriatric (1), and sterile compounding (1)

October '23 Advanced Prep Implementation:

• Enhancing OR efficiency and patient safety by implementing Epic Advanced Prep tools and shifting medication compounding from inside of the OR into pharmacy-run spaces

Meet the Team



Education & Training Programs

Domini Hood, PharmD, Manager, Education Enterprise

Tiffany Pon, PharmD, BCPS, Co-Director, UCSF Greater Sacramento Area Experiential Program Shannan Takhar, PharmD, BCACP, Co-Director, UCSF Greater Sacramento Area Experiential Program

Nikki Fairbanks, CPhT, Supervisor Central Operations





2023-2024 Resident Class

Major Accomplishments in FY23

- ~70 % retention rate of PGY1 > & PGY2 residents
- Hosted the 6th Annual UC Pharmacy Collaborative Conference

Residency Program Directors & Coordinators

- Two successful Technician Extern Program graduates
- 95% residency match rate of UCSF Greater Sacramento Area Students
- Provided 22 hours of Continuing Pharmacy Education to staff
- Residents provided 1028 teaching hours to colleagues and students
- Learners completed 985
 medication histories and 543
 Anticoagulation Educations

Primary Care Clinical Services



Diabetes Management

Hypertension Management

Pain/Opioid Stewardship

Substance Use Disorder Treatment

Geriatrics Medication Management

> Medication Reconciliation

Medication cost/access

UC Davis Health Clinics

>18,500 Patient Care Encounters

>400 Medication Financial Assistance cases supported

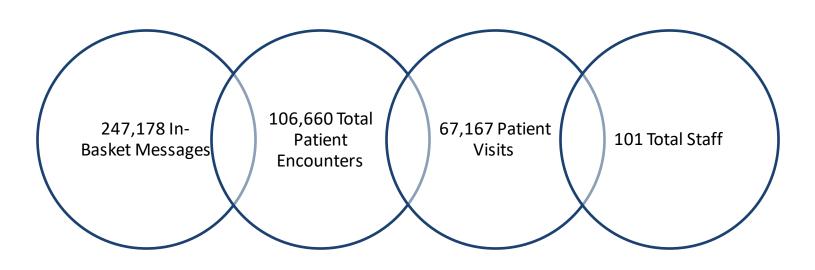
HTN control disparity gap reduction

Most impactful projects, UC Collaborative Research Conference

Ambulatory Care Clinical Services

Our Ambulatory Care Clinical team operates under 24 CPAs with various service lines throughout ambulatory care.





Central Clinical Pharmacy Services









Refill and Prior Authorization

- 22,500 patients with 1,200 refill encounters per week
- 64,000 refills/year with an average turnaround time of 33 hours
- Refill support for six primary care and specialty clinics by end of FY23
- Submitted 24,688 PAs with an approval rate > 75%
- Submitted 693 appeals

Anticoagulation

- Manages 725 patients/year
- 370 pharmacist encounters/week and ~ 24,000 encounters yearly
- Time in therapeutic range (TTR) is 70.3%
- Anticoagulation clinic initiates pharmacist DOAC transitions, education, financial assistance and overall clinic support

Population Health and Accountable Care



Population Health - Transitions of Care

- Clinical pharmacy support for Skilled Nursing Facility Care Collaboration and Care Transitions program
 - 514 Patient encounters
 - 859 Admission and Discharge medication reconciliations
 - 283 Post-discharge follow-ups
 - 63% of errors identified were either Serious or Life-threatening
- Incentive-based Programs
 - Quality Incentive Program support UCDH & Sac County Health Center for medication metrics
 - STARS achieved 5-star rating for 3/4 medication metrics

Accountable Care

- Utilization Management
 - Reviews medical necessity for 42,000 Managed Care patients over 6 payor contracts
 - Referral volume: 6,600
 - Turn Around Time: 90% within goal
- Emerging Therapy
 - Assess risk and coordinate operational logistics of high-cost therapies (e.g., >\$300,000 per patient per year)
 - 4th site in the nation to infuse Elevidys, a new gene therapy for Duchenne Muscular Dystrophy

Retail Pharmacy Services

Retail pharmacies provide traditional outpatient pharmacy services to patients and employees, including screening prescriptions for appropriateness, insurance billing, dispensing, and providing consultation to patients and staff.

We operate five locations, including two locations that dispense specialty drugs, across the hospital campus in Sacramento and in Davis. We strive to meet the needs of our customers by providing exceptional service and ensuring the safe use of medications to provide the best possible patient outcomes.

- Pavilion Pharmacy: 170,939 (+8.7%): Only pharmacy in the main hospital, serving discharge and ED patients 7 days a week
- ACC Pharmacy: 55,723 (+15.9%): Serving primary care and specialty clinics, and Same Day Surgery
- Cancer Center Pharmacy: 35,541 (+12.7%): Serving oncology and hospice
- Cypress Pharmacy: 104,624 (+10.9%): Serving patients receiving specialty drugs
- UC Davis Clinic Pharmacy: 30,508 (+1.6%): Serving patients of UC Davis Medical Group, staff at main academic campus, and the surrounding community

10% increase in total prescription dispensed

28% increase in total operating revenue

Fully implemented Willow Inventory with inventory management and 340B qualification and billing logic

Implemented prior authorization program for discharge prescriptions

Recouped \$650,000 in revenue through claims review and billing audits

Achieved \$3.6 million in revenue enhancements through better payer contracting

Implemented limited formulary of OTC products for sales to employees and patients at all locations

Achieved 99.75% accuracy in claims billing based on audits of claims totaling \$5.5 million



340B Program

This federal program, guided by Health Resources and Services Administration (HRSA) and the Office of Pharmacy Affairs (OPA), requires drug manufacturers to provide discounted medication to entities who provide services to a disproportionate share of the underserved population.

The primary goal is to ensure continuous compliance, while maximizing savings and opportunities to ensure that UCDH meets the intent of this important program: to stretch scarce federal resources as far as possible, reaching more eligible patients and providing more comprehensive services



CONTRACTS

 Added 15 new contract pharmacies

LDDs

 Gained access to several Limited Distribution Drugs (LDDs)

CLAIMS

 Manually reviewed and qualified claims

340B Highlights

Gained access to lenalidomide and pomalidomide at a designated contract pharmacy

Transitioned management of retail/specialty 340B program to Epic Willow Ambulatory

Onboarded TPA for management of Home Infusion Pharmacy

Converted contrast agents to a non-covered outpatient drug status to mitigate 340B and billing compliance

Collaborated with
Purchasing and Pharmacy
Billing to decrease
Inpatient WAC spend
from 8% to 7%

Initiated 340B billing audit for retail Medi-Cal claims

Lobbied with lawmakers to protect the 340B program

Conducted review of radiopharmaceuticals for 340B compliance

Audited over 12,000 transactions for 340B compliance

Home Infusion Services

Our mission is to provide user friendly home infusion and our vision is to be the preferred home infusion provider for UC Health patients. The UC Davis Health at Home team consists of highly trained billers, nurses, pharmacists, and pharmacy technician navigators.

45 Average Patient Census

25

Therapies Offered

10 Counties Served

2

Active Accreditations



Looking forward:

- Begin servicing acute therapies in Spring 2024
- Implementing 4 infusion suites at new pharmacy location
- Enhance nursing partnerships throughout rural California counties
- Continue to add therapies to meet the needs of all UC Davis patients and providers

Pharmacy Business Services

Pharmacy Business Services, is a High Value Pharmacy Enterprise domain that encompasses Pharmacy Finance, Revenue Cycle, Supply Chain Services, and provides enterprise oversight for pharmaceutical financial management.

Since 2021, +8 FTEs; 3 FTEs (finance) – project policy analysts in pharmacy finance, revenue cycle, strategic sourcing, and 5 FTEs (pharmacy supply chain).







Pharmacy Dept
Affordability \$20M+

Revenue Charge Capture & NTAP \$10M+

Contracting & Capital Managed

Vizient Pharmacy Vision Award 2023

Pharmacy Supply Chain Services

As a part of UCDH Pharmacy Business Services, Pharmacy Supply Chain Services are improving lives and transforming health care through supply chain risk management of essential pharmaceuticals and services required by UC Davis Health. Our services enhance enterprise adaptability to disruptions, maximize operational resilience to enable clinical strategic expansions, and develop dynamic partnerships, trust, and growth.

UCDAVIS HEALTH

Department of Pharmacy

Pharmacy Supply Chain Services

Major Accomplishments & Strategic Initiatives

- Since 2021, +5 FTEs
 - 2 pharmacist specialist
 - 2 procurement analysts
 - 1 procurement analyst lead
- Conversions, reductions, inventory \$3M
- Visual drug shortage database (Asana & Sharepoint)
- Pharmacy Supply Chain Shared Services coming FY24!
- DSCSA compliance and implementation 11/2023







Specialty Pharmacy Services

UC Davis Health launched its specialty pharmacy program in 2010. It provides clinical pharmacy services in the following areas: Allergy, Cardiology, Dermatology, Endocrinology, Gastroenterology, Hepatology, Infectious Diseases, Neurology, Oncology, Pulmonology, Rheumatology, Solid Organ Transplant. Our team is made up of 35 pharmacists, 46 technicians, 2 analyst and 7 leaders.





29% Revenue Increase from FY22

Ranked Nationally in

Patient Satisfaction Survey in NASP

1872 Patients received financial assistance for medications due to SP

Staff efforts

9 New Manufacturer limited distribution drugs acquired









97.7% **Total Patient/Provider Satisfaction**

133,981 **Total Rx Dispensed**

28,526 **Patient Calls**

6,981 **Total Prior Authorizations**

18,500 **Total Specialty Rx**

99.2% Calls Answered in <30 seconds

2.5 days **Overall Rx Turn Around Time**

84,532 Total Rx Deliveries

\$13,379,538 Total Financial Assistance Provided

Specialty Pharmacy Services

Specialty Pharmacy implemented Compass Rose, a patient management software embedded in Epic, to manage our patients within our therapy areas. This new software will allow us to track and automatically create tasks to ensure more thorough care for our patients.

Specialty Pharmacy achieved 2 accreditation milestones in 2023. We earned a new accreditation with The Joint Commission (TJC) earlier this year, and our URAC reaccreditation for the next 3 years. Both accreditors visited us within a week of each other, and there were no major findings for either of them!

Cypress Pharmacy underwent major decluttering and reorganization during the 5S project. This event resulted in improved safety, reduced clutter, and reduced amount of motion for our staff.











Oncology Specialty

The Oncology Specialty Pharmacy Team was established in collaboration with the Department of Hematology/Oncology in October 2013. The pharmacists and pharmacy technicians work with the care team to create individually tailored therapies designed to help patients achieve the best possible clinical outcomes.



Solid Organ Transplant

The Solid Organ Transplant Team comprises of both inpatient & ambulatory care pharmacists that provide comprehensive medication management services for kidney, liver, and heart transplant patients. The team has continued to grow with the launch of the liver transplant program in July 2023 and the expected launch of heart transplant program in December 2023.



PUBLICATIONS, PRESENTATIONS, AWARDS & COMMITTEE APPOINTMENTS 22/23

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PRESENTATIONS

Aaron Roberts PharmD, BCPS-AQ Cardiology, AACC

- When the Blood Bank Runs Dry: Use and Stewardship of Concentrated Clotting Factors. 57th ASHP Midyear Clinical Meeting & Exhibition. Las Vegas, NV Dec 7, 2022
- Exploring devices that influencing anticoagulant or antiplatelet therapy. 37th Pharmacy Innovations Conference on Antithrombotic Therapy (PICAT) Advances and Updates in Antithrombotic Therapy 2022. Virtual Conference, Dec 3, 2022

Brent Hall PharmD, BCPPS

- "How Did I Get Here?" Presentation to California SCCP chapter, November 30, 2022
- "Which path is right for me?? Pediatric Residency Training Options: A Panel Discussion." Presented to students from the ACCP Pedi-PRN and Pediatric Pharmacy Association, October 6, 2022
- Pediatrics PRN Focus Session -- 'An Intersection of Global Crises: Pediatric Psychiatry in the Time of COVID-19', 2022 ACCP Global Conference on Clinical Pharmacy, San Francisco, Ca, October 18, 2022. Moderator, Organizer

Brittany Verkerk, PharmD, BCCCP

- Hofstra University Cardiovascular Sciences and Perfusion Medicine, Pharmacology Class: Drugs Used in Disorders of Coagulation, 2022.
- ACCP Global Conference on Clinical Pharmacy, Pulmonary PRN Focus Session: Respiratory Devices for Inpatient Management: A
 Primer for Clinical Pharmacists, 2022.

Charity Hale, Pharm.D.

 "Machine Learning for Health 2023: Elahe Hosseini, Abhinav Srinivas, Setareh Rafatirad, Charity Hale, Houman Homayoun. Large Language Models for Opioid-Induced Respiratory Depression Prediction in Hospitalized Patients: A Retrospective Study. Submitted for 2023 Symposium

David Li, PharmD, BCCCP, CNSC

• Kang, Cindy; Li, David; Roberts, Josh. SHOCK6: Assessment of anticoagulation status with thrombin time during bivalirudin infusion in patients on extracorporeal life support. ASAIO Journal 69 (Supplement 2):p 13, June 2023.

David G. Mitchell, PharmD, MBA, CSP, FCPhA

 Low Rates of Primary Medication Non-Adherence in Patients Prescribed Oral Oncology Agents Across Health-System Specialty Pharmacies, Authors: Autumn Zuckerman, PharmD, BCPS, AAHIVP, CSP, Jared Crumb, PharmD, Huda Marie Kandah, Pharm.D., BCPS, CSP, Thom Platt, PharmD, PhD, MBA, BCPS, Debbie Duckworth, PharmD, CSP, Kristina Lo, PharmD, BCOP, David Mitchell, PharmD, MBA, CSP, FCPhA, Erica Diamantides, PharmD, MHA, BCPS, Caitlin Murphy Streck, PharmD, Josh DeClercq, MS, Leena Choi, PhD, Ruchik Patel, PharmD. Post Presented at AMCP 2023

Domini Hood, PharmD

· Vizient Pharmacy Network Meeting: Precepting Made Easy - Creating a Standard Approach to Prevent Burnout, 2022

Iris Zhao, PharmD, BCOP, BCPS, APh

• 2023 Forbidden City International Pharmacist Forum: "Navigating Care for Patients on Oral Oncolytics"

Jennifer Murphy, PharmD, BCOP

- Research Pharmacy Summit: Know your Worth: Billing and Metrics in the IDS World, 2022;
- Horizon CME Oncology 101: Targeted Therapies, 2022 and 2023
- HOPA: Core Competency IDS Module, 2023

Jennifer Craven, PharmD, BCPS

 AMCP Webinar hosted by Formulary Decisions: Breaking Down the Complexities of Product Evaluation in the Digital Era. Presented Tuesday, Feb. 28, 2023 at 2–3pm ET

PRESENTATIONS

Jeremiah Duby, PharmD, BCPS, BCCCP, FCCM

- Novel Agents for Multimodal Pain Management in Critically III Patients. Annual Congress. Society of Critical Care Medicine. January 19, 2023.
- Blood Pressure Reduction and Risk of Acute Kidney Injury in Patients with Aortic Syndromes. Research Snapshot Theater. Annual Congress. Society of Critical Care Medicine.
- Effect of Gabapentin and Methocarbamol on Length of Stay in Patients with Traumatic Rib Fractures. Research Snapshot Theater. Annual Congress. Society of Critical Care Medicine.
- Impact of Vaccination on Cost and Course of Hospitalization Associated with COVID-19 Infection. Research Snapshot Theater. Annual Congress. Society of Critical Care Medicine.

Jessica Ma, PharmD, BCPPS

• Ma J, Nandalike K, Jhawar S, Kamerman-Kretzmer R, Shi Y. Cutaneous rash with Elexacaftor/tezacaftor/ivacaftor in children with cystic fibrosis. Poster presented at: North American Cystic Fibrosis Conference. 2022 November 3-5; Philadelphia, PA

Jin A. Lee, PharmD, BCCCP

• Effect of Gabapentin and Methocarbamol on Length of Stay in Patients with Traumatic Rib Fractures. Research Snapshot Theater. Annual Congress. Society of Critical Care Medicine, 2023.

Joy Dray, PharmD, BCACP, AAHIVP

• ACCP Global Conference on Clinical Pharmacy AND CSHP. Berkley E, Takhar S, Wilson M, Fine J, Ho T, Dray J. Effectiveness of a n Opioid Stewardship Guideline in Renal Transplant Recipients Post-Discharge. 2022

Joyce Lee, PharmD, BCOP, BCPS

Invited speaker. Advanced Practice Provider Clinical Research Workshop at Southwest Oncology Group (SWOG) Fall Meeting 2022

Kassi Bugg, PharmD, BCACP

- CSHP Seminar 2022 Poster: Implementation of Epic Turbocharger Refill Protocols at a pharmacist-run refill clinic
- CSHP Seminar 2023 Poster: Implementation of a Comprehensive Medication Review Video Visits Within a Centralized Pharmacist Refill Service
- Anticoagulation Forum 2023 Poster: Evaluating the Process of Transitioning Atrial Fibrillation (AF) Patients from Warfarin to a Direct Oral Anticoagulant (DOAC) in a Pharmacist-led Anticoagulation Clinic

Monica Donnelley, PharmD, BCIDP, BCPS, AAHIVP

- Critical Care Congress, HABP/VABP: Strategies for Early Effective Therapy in Critically III Patients, January 2023
- Clement, J, Barlingay, G, Donnelley MA, Crabtree, Scott. Risk Factors for the Development of Clostridioides difficile Infection in Patients Colonized with Clostridioides difficile. ID Week October 2022, Washington, DC. [Poster]
- Shah, M, Horton, M, Donnelley MA. Establishing Pharmacokinetic Profile of β-lactams in Critically III Patients on Continuous Sustained Low-efficiency Dialysis (C-SLED) ID Week October 2022, Washington, DC. [Poster]
- Bradford, W, Donnelley MA, Fine, J, Crabtree, S. Blood culture identification (BCID) performance in polymicrobial bacteremia. ID Week October 2022, Washington, DC. [Poster]

Mackenzie Pierce, PharmD, BCPS, BCPP

AAPP Annual Meeting: Implementation of Psychiatric Pharmacists at Academic Medical Center [poster], 2023

Maki Usui, PharmD, BCPPS

• Evaluation of hypersensitivity reactions with intravenous vs intramuscular pegas pargase after diphenhydramine premedication in leukemia patients. Children's Oncology Group, 2022

Ryan Beechinor, PharmD, BCPS, BCOP

- Hematology/Oncology Pharmacy Association 2023 Annual Meeting, Practical Management of AML with a BCL-2 Inhibitor, March 2023
- Krackeler ML, Moskoff B, Othman T, Azenkot T, Beechinor RJ, Rosenberg AS, Esteghamat NS, Hoeg RT, Tuscano JM, Jonas BA.
 Healthcare Resource Utilization in Acute Myeloid Leukemia Treatments: Hypomethylating Agent + Venetoclax Vs. High Intensity Regimens. (Abstract 4024/Session 613). Presented at the 64th ASH Annual Meetings, December 12, 2022 in New Orleans, LA.

PRESENTATIONS

Ryan Cello, PharmD

- Formulary Management Best Practice. May 2022. BD Pyxis -Epic Bimonthly Thought Leader Call
- Data Analytics: Development of Analytics Teams, Dashboards, and Visualizations. September 2022. BD Pyxis -Epic Bimonthly Thought Leader Call

Rachelle Firestone, PharmD, BCCCP

Gen Z, The Next Generation – Where No Preceptor Has Gone Before
 National Pharmacy Preceptors Conference, American Society of Health-System Pharmacists (October 2022)
 Pacific Coast Preceptor Conference, California Society of Health-System Pharmacists (May 2022)

Sarah Cummins, PharmD

- Massachusetts Society of Health-System Pharmacists: Barriers to Overcoming Financially Disadvantaged Backgrounds and Pursuing Higher Education, 2022
- CSHP Seminar: Optimizing Residency Rubrics and Recruitment Strategies to Increase Diversity, Equity, and Inclusion, 2022

Sydney Graboyes, PharmD, MBA, BCCP

• Touro University School of Pharmacy: Anticoagulation Reversal - Acute Care Elective

Selina Somani PharmD, MHA, BCPS

• Society of Critical Care Medicine National Congress: Impact of COVID-19 vaccination status on cost of COVID-19 related hospitalization

Selena Warminski, PharmD, BCPPS

• Warminski SM, Bhavsar V, Hall B, et al. Impact of To Keep Open (TKO) Protocol on Fluid Overload in Pediatric Patients [abstract]. Academy College of Clinical Pharmacy Global Conference. October 16th, 2022. Abstract number 60646. (San Francisco, CA)

Tiffany Pon, PharmD, BCPS

- Gen Z, The Next Generation Where No Preceptor Has Gone Before, 2022 CSHP Pacific Coast Preceptors Conference AND 2022 ASHP National Pharmacy Preceptors Conference. Co-presented with Rachelle Firestone and Julie Guglielmo
- It Takes a Village: Structure and Outcomes of a Master Preceptor Program, 2022 CSHP Pacific Coast Preceptors Conference AND 2022 ASHP National Pharmacy Preceptors Conference
- Impact of pharmacist led discharge medication reconciliation on error and patient harm prevention, 2022 Vizient Pharmacy Network Resident Poster Session. Co-presented with Linda Zheng (first author), Sarah Bajorek, Kathie Le, Becky Hluhanich
- Impact evaluation of an interprofessional chronicillness teaching series, 2023 Society of Teachers of Family Medicine Annual Conference Poster Session. Co-presented with Ellen Berkley, Rebecca Howe, MD, Dylan Sabb, MD, and Shreeya Raman, MD

Jin A. Lee, PharmD, BCCCP

• Effect of Gabapentin and Methocarbamol on Length of Stay in Patients with Traumatic Rib Fractures. Research Snapshot Theater. Annual Congress. Society of Critical Care Medicine, 2023.

Zachary Carlson, PharmD

• UC Pharmacy Collaborative Conference 2023: Impact of Combination Therapy with Ceftaroline and Daptomycinin MRSA Bacteremia at a Major Academic Medical Center

AWARDS

FRIENDS OF NURSING – UC DAVIS HEALTH

Nursing Excellence Award

Christopher Adams, PharmD, BCCCP Senior Emergency Medicine Pharmacist

Nursing Excellence Award

Haley Burns, PharmD, BCEM Emergency Medicine Pharmacist

Safety Catch of the Year - Nursing Excellence Award

Jenny Zhao, PharmD OR Pharmacist

Nursing Excellence Award

Jessica Falksen, PharmD Critical Care Pharmacist

Nursing Excellence Award

Joy Dray, PharmD, BCACP, AAHIVP Senior Ambulatory Care Pharmacist

Nursing Excellence Award

Kristine Markham, PharmD, BCPPS Pediatric Pharmacist

Nursing Excellence Award

Richard Haftmann, PharmD, BCPPS Pediatric Pharmacist

Nursing Excellence Award

Rachelle Firestone, PharmD, BCCCP Senior Critical Care Pharmacist

Nursing Excellence Award

San Hua, PharmD
Senior Medication Security Pharmacist

PHARMACY SCHOOLS

Rho Chi Distinguished Guest Lecturer, Spring 2023

Annie Cabri, PharmD Informatic & Analytic Pharmacist

UCSF Preceptor of the Year 2022-2023

Bo Liu, PharmD, BCPS Internal Medicine Pharmacists

UCSF Apples for Preceptor Award

Jeremiah Duby, PharmD, BCPS, BCCCP, FCCM Critical Care Pharmacist

Most Dedicated Professor June 2023

Monica Donnelley, PharmD, BCPS, AQ-ID, AAHIVP Infectious Disease Pharmacist

UCSF Apples for Preceptor Award

Robyn Stoianovici, PharmD, BCCCP Critical Care Pharmacist

UCSF Apples for Preceptor Award

Sierra Young, PharmD Critical Care Pharmacist

UCSF Apples for Preceptor Award

Samantha VanAcker, PharmD, BCNSP Nutrition Support

UCSF Apples for Preceptor Award

Svetlana Goldman, PharmD, BCACP, CDCES Ambulatory Cardiology Pharmacist

UC DAVIS HEALTH

AACP Preceptor of the Year 2022-2023

Brent Hall, PharmD, BCPPS Pediatric Pharmacist

POP Award

Michael Pitner Specialty Technician III

UC Davis Excellence Award

Monica Donnelley, PharmD, BCPS, AQ-ID, AAHIVP Infectious Disease Pharmacist

2022-2023 Residency Preceptor of the Year

Sydney Graboyes, PharmD, BCCP, MBA Cardiology Pharmacist

EXTERNAL

Presidential Citation, Society of Critical Care Medicine

Jeremiah Duby, PharmD, BCPS, BCCCP, FCCM Critical Care Pharmacist

Fellow of Critical Care Medicine, Society of Critical Care Medicine

Rachelle Firestone, PharmD, BCCCP Senior Critical Care Pharmacist

COMMITTEE APPOINTMENT

Brent Hall, PharmD, BCPPS Pediatric Pharmacist	ACCP - Pediatric PRN Chair Elect, October 2023 ACCP - Pediatric Student Committee - Advisor, October 2022 - present Pediatric Pharmacy Association - Residency Program Director SIG, Chair Elect - May 2023 Board of Pharmacy Specialists - Pediatric Pharmacy Specialty Council, Member — 2024 - 2026 Wolter/Kluwer Lexi Comp - Consultant - 2020 - present
Brittany Verkerk, PharmD Critical Care Pharmacist	Member, Adult Item Writing Committee, SCCM, Feb 2022-Present. (3-yr apt)
Chang Truong, PharmD, MS, BCPS Critical Care Pharmacist	Chair, UC Health Pharmacy Purchasing Collaborative, June 2023 Member, AmerisourceBergen Corporation Hospital Operational Committee, February 2023
David G. Mitchell, PharmD, MBA, CSP, FCPhA Specialty Pharmacist Manager	California Pharmacists Association (CPhA) — Treasurer CPhA Finance and Audit Committee - Chair CPhA Finance and Investment Committee - Member
David Vermeulen, PharmD, MS Home Infusion manager	Board of Directors, National Home Infusion Association, April 2023
Ha-Mill McLearan, PharmD, BCPPS Pediatric Oncology Pharmacist	Children's Oncology Group PSC- Vice Chair of Career Development, COG, March 2020 Children's Oncology Group MECC- Co-Chair, COG, Feb 2021 Children's Oncology Group LTC- Disease State Liaison, COG, Oct 2022
Jeremiah Duby, PharmD, BCPS, BCCCP, FCCM Critical Care Pharmacist	Board of Pharmacy Specialties (BPS) Council Member — Critical Care. Program Committee. Society of Critical Care Medicine. Clinical Practice Guideline: Pain, Agitation, Delirium, Early Mobilization and Sleep. Society of Critical Care Medicine.
Kofi Andoh, PharmD, MS Home Infusion Manager	Member, Section of Pharmacy Practice Leaders Advisory Group on Frontline Leaders, ASHP, July 2023
Rachelle Firestone, PharmD, BCCCP Senior Critical Care Pharmacist	Co-Lead, UC Critical Care Pharmacy Collaborative Board of Directors, Society of Critical Care Medicine, Northern California chapter Member appointment, Society of Critical Care Medicine, Membership Committee
Ryan Beechinor, PharmD, BCPS, BCOP Senior Cancer Center Pharmacist	Planning Committee, Horizon CME Oncology 102, May 2023 Chair, Hematology/Oncology Pharmacist Association (HOPA) Education Development Committee 2022
Ryan Cello, PharmD Informatic & Analytic Pharmacist	Director-at-Large (Installed 2023), for the Section of Pharmacy Informatics and Technology Executive Committee (2022-2025)
Samantha VanAcker, PharmD,BCNSP Nutrition Support Pharmacist	Member, Clinical Practice Committee, American Society for Parenteral and Enteral Nutrition, 2023 Member, Education and Professional Development Committee, American Society for Parenteral and Enteral Nutrition, 2023
Selina Somani PharmD, MHA, BCPS Transplant Pharmacy Manager	Vizient Professional Development and Workforce Subcommittee Lead
Sydney Graboyes, PharmD, BCCP, MBA Cardiology Pharmacist	ACCP Cardiology PRN Communications & Social Media Committee, Work Group Lead 2023 ACCP BCCP Board Prep Chapter Reviewer and Field Tester
Tiffany Pon, PharmD, BCPS General Medicine Pharmacist	Member, Clinical Research Challenge Oversight Panel, ACCP, 2018-Present Member, Blue Shield of California Pharmacy and Therapeutics Committee, 2015-Present

