

2022 PHARMACY ANNUAL REPORT



2022



BAPTIST HEALTH[®]

PHARMACY



BAPTIST HEALTH®

OUR MISSION

Baptist Health demonstrates the love of Christ by providing and coordinating care and improving health in our communities.

OUR VISION

Baptist Health will lead in clinical excellence, compassionate care and growth to meet the needs of our patients.

OUR VALUES

Integrity | Respect | Compassion | Excellence | Collaboration | Joy

COMMITMENT TO PATIENT SAFETY

Continuously improve patient outcomes through a culture of safety and clinical excellence.

PHARMACY MISSION

Baptist Health Pharmacy strives to ensure the safe and appropriate use of medications and provide drug information and education to healthcare professionals, patients and the community.

PHARMACY VISION

Baptist Health Pharmacy strives to support Baptist Health's vision to lead in clinical excellence, compassionate care and growth to meet the need of our patients.

PHARMACY VALUES

Community Well-Being | Inclusiveness | Empathy | Innovation | Outcomes

A MESSAGE FROM OUR CHIEF PHARMACY OFFICER

Each year, I stand in awe of the remarkable extent of high-quality, patient-focused work that Baptist Health's Pharmacy team delivers. This year is no exception. It is arguably one of the most prolific years of pharmacy accomplishments Baptist Health has seen.



As a Pharmacy team, we strive to develop a sustainable pharmacy enterprise that promotes exceptional patient care, safety, and clinical and financial outcomes. It is within our scope of practice to be involved in patient care services, and our decentralized clinical care model allows us to have an optimal impact on our patients, providers and clinical staff.

The development of clinical achievement pathways for pharmacists and technicians, along with our newly implemented technician career ladder, has created a goal-oriented team that works to advance its professional practice, clinical skills, community service and leadership. The team also is committed to lifelong learning and to training future pharmacists through pharmacy residency programs and partnerships with local colleges.

Last, but not least, the Pharmacy's adoption of technology has helped to improve Baptist Health's ability to treat patients safely and effectively while also remaining fiscally responsible.

Pharmacy services are an integral part of Baptist Health's growth strategy, and they will play an important role in the organization in the coming years.

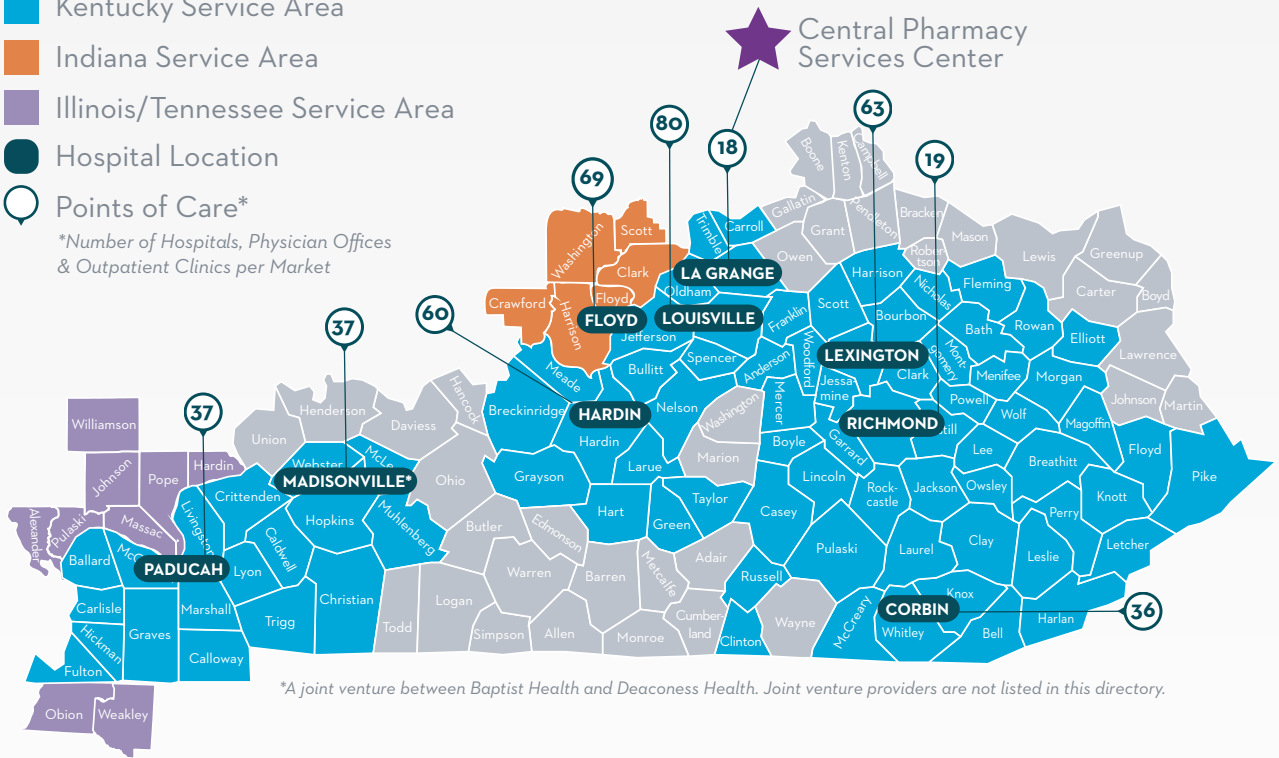
It is a privilege for me to present the 2022 Baptist Health Pharmacy Report. This report details the above initiatives and highlights the recent contributions of the Pharmacy team as we work to achieve Baptist Health's vision to lead in clinical excellence, compassionate care and growth to meet the needs of our patients.

Sincerely,
Niles Desai, MBA, BS, RPh, CPPS
Chief Pharmacy Officer
Baptist Health

OUR SYSTEM

- Kentucky Service Area
- Indiana Service Area
- Illinois/Tennessee Service Area
- Hospital Location
- Points of Care*

*Number of Hospitals, Physician Offices & Outpatient Clinics per Market



*A joint venture between Baptist Health and Deaconess Health. Joint venture providers are not listed in this directory.

9 HOSPITALS

2,740 BEDS

7 340B-ELIGIBLE LOCATIONS

6 340B CHILD SITE LOCATIONS

6 INFUSION CENTERS

10 COMMUNITY PHARMACIES

OVERVIEW OF SERVICES

Baptist Health provides pharmacy services to patients in all phases of life, newborn to geriatric, both inpatient and outpatient. Pharmaceutical care begins with a comprehensive evaluation of a patient's medication use, with goals to optimize drug therapy and minimize adverse events.

Our pharmacies offer:

- Community prescription access for patients at 10 Baptist Health locations.
- 24/7 inpatient services.
- Medication order evaluation, preparation and dispensing for patient-specific requirements.
- Innovations in medical technology that enhance the medication-use process.
- Formulary and inventory management.
- A system of controls to monitor and maintain regulatory compliance.
- Drug preparation and sterile compounding.
- Development of drug guidelines, order sets and care maps.
- Investigational protocols for patient populations.
- Collaboration with Baptist Health Service Lines.
- Medication reconciliation, education and discharge counseling for patient populations.
- Educational activities for healthcare practitioners and for community health education programs.
- Educational activities and hospital rotation opportunities for pharmacy students.



THE BAPTIST HEALTH SYSTEM PHARMACY TEAM



Sanchita Damania
Director of Medication
Safety and Regulatory



Chirag Desai
Director of Pharmacy
Outcomes and Data
Management



Christopher Diem
340B Pharmacy
Program Director



Gregory Fakelmann
System Director, Pharmacy
Clinical Services



Leslie Hurst
System Director,
Ambulatory and Specialty
Pharmacy



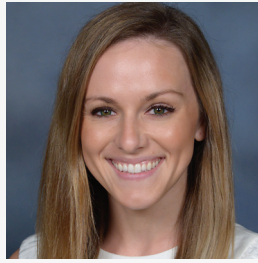
Thomas Matanich
Director, Pharmacy
Contract Management



Brandon McLain
System Director of
Pharmacy Operations



Shweta Desai
Manager of System
Pharmacy Ambulatory
Services



Shaina Doyen
System Manager of
Antimicrobial Stewardship



Asit Gurjar
Pharmacy Systems
Business Manager



Stephen Howell
Investigational Drug
Pharmacist



Rebecca Pettinato
Manager of Specialty
Pharmacy Clinics



Jordan Propst
Ambulatory Pharmacy
Compliance Manager



Frieda Hutchins
Pharmacy Value-Based
Care Specialist



Lauren Johnson
Pharmacy Value-Based
Care Specialist



Shanna Schneider
Clinical Reimbursement
Pharmacist

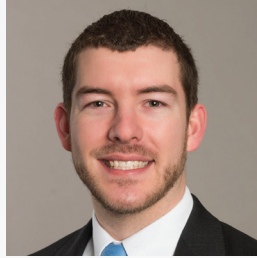


Lyndsey Cooper
Executive Assistant

BAPTIST HEALTH PHARMACY HOSPITAL LEADERSHIP



Lynn McArthur
Director of Pharmacy
Corbin



Evan Hampton
Director of Pharmacy
Floyd



Jamie Lane
Director of Pharmacy
Hardin



Angela Sandlin
Director of Pharmacy
La Grange



Michael Anderson
Director of Pharmacy
Lexington



Lance Ballard
Director of Pharmacy
Louisville



Margo Ashby
Director of Pharmacy
Madisonville



Laura Madison
Director of Pharmacy
Paducah



Laurel Taylor
Director of Pharmacy
Richmond



John Carver
Pharmacy Manager
Louisville

GROWTH TO MEET THE NEEDS OF OUR COMMUNITIES

Central Pharmacy Services Center

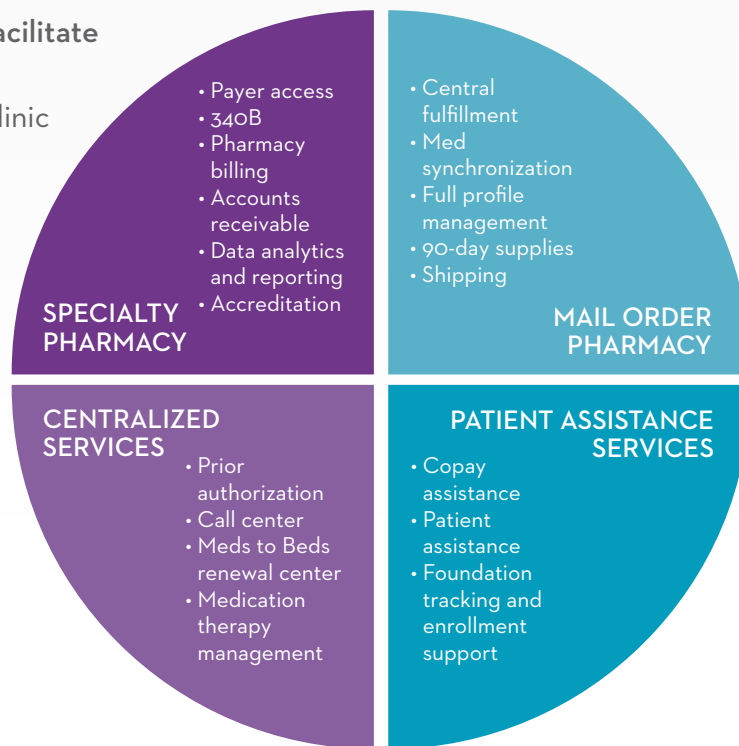
Baptist Health has plans to construct a 90,000-square-foot Central Pharmacy Services Center in an undeveloped area of the Baptist Health La Grange campus property. The Central Pharmacy will benefit patients by increasing efficiency at community (retail) and hospital pharmacies, as well as expanding mail order and specialty pharmacy services across the business.

Aside from increased efficiency, the Central Pharmacy will enhance inventory management in community pharmacies, hospitals and clinics, freeing up time for staff to devote to patient-facing activities.

Cost: \$39 million | Project ROI: 500% | Payback period: 4.1 years
Project completion: December 2023

Centralized pharmacy services that facilitate the coordination of care:

- Medication utilization, hospital and clinic formulary management.
- Drug information services.
- Transitions of care.
- Central hub for medication reconciliation.
- Value-based care and population health.
- Kit and tray production and distribution.
- Centralized inventory management and distribution.
- Bulk to unit-dose repackaging
- Medication cabinet fill for hospitals.



This architectural rendering is for conceptual purposes only and may be subject to change.

PHARMACY FINANCE

TOTAL DRUG SPEND: \$429 MILLION

Savings

- Patient assistance: **\$1.9 million**
- Rebates: **\$4.2 million**
- 340B savings: **\$152 million**

Revenue

- Community Pharmacy: **\$73 million**
- Specialty Pharmacy: **\$107 million**
- Outpatient infusion centers: **\$1.5 billion**



Supply chain

Pharmacy Contracting is responsible for negotiating pricing for pharmaceuticals, equipment, software and supplies needed for Baptist Health's nine hospitals, 10 community pharmacies, four surgery centers, six stand-alone infusion centers, and approximately 200 clinics.

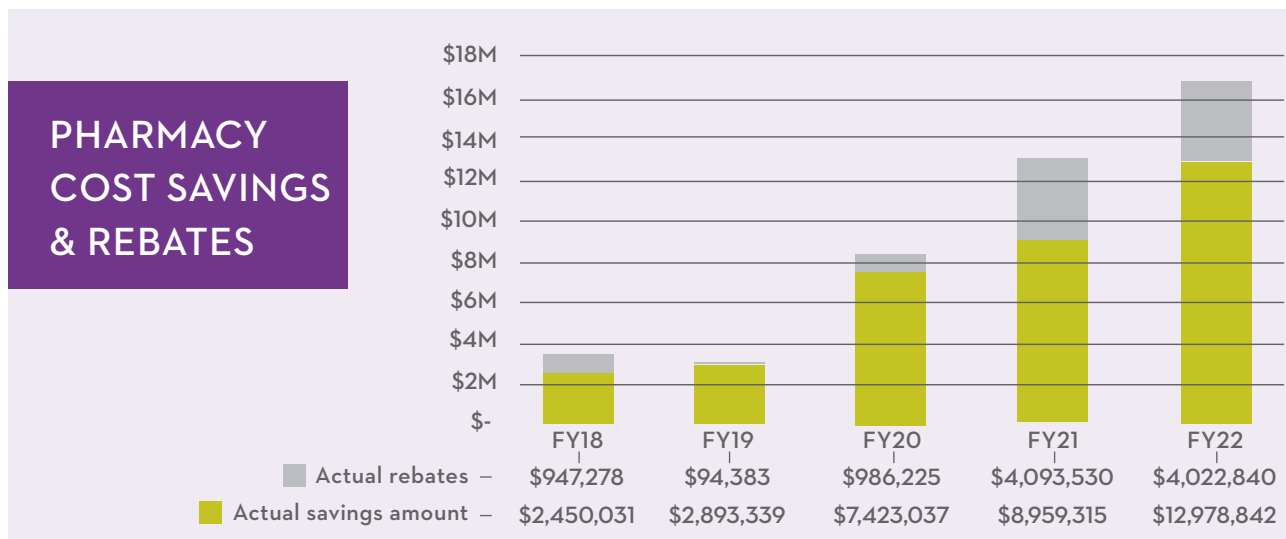
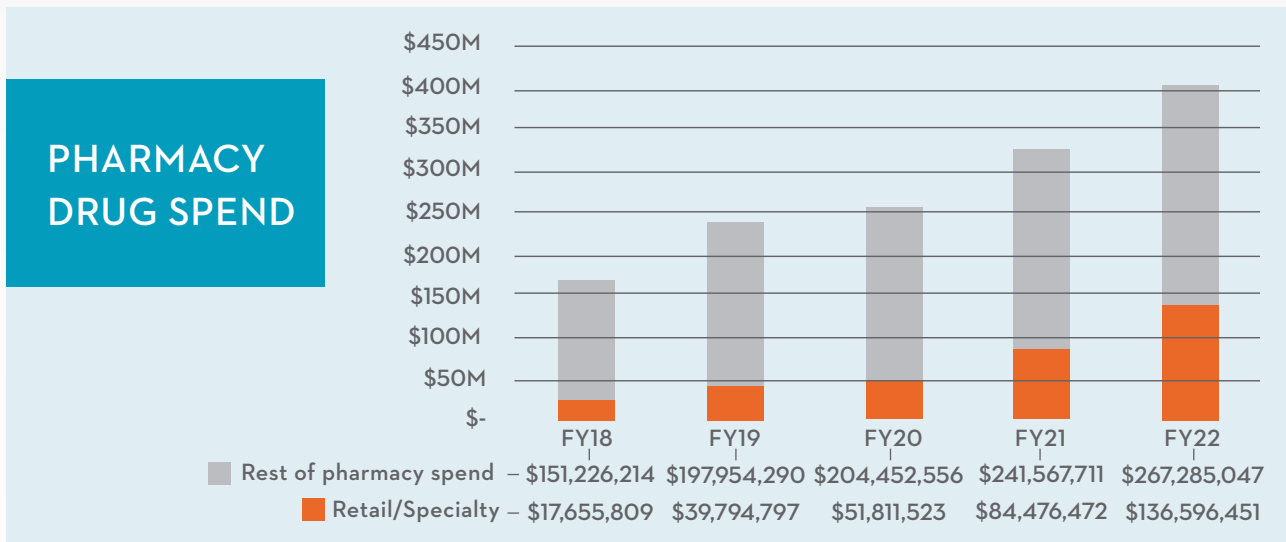
Fiscal year 2022

- **\$429 million** in total system pharmaceutical spend.
- **\$12.9 million** in savings.
- **\$32 million** on-hand system inventory.
- **948** unique vendors.
- **16,533** unique National Drug Codes ordered.
- **137** signed agreements.
- **Eight** new technology implementations.



2023 PROJECTS

- Renewal of several vendor agreements.
- System expansion of biosimilars.
- Pharmaceutical spend optimization strategy.
- Epic enhancements for order set standardization.
- 340B system audit and contract pharmacy expansion.
- Medication adherence initiatives to improve quality metrics.
- Technology integration with Epic to align parenteral nutrition.
- Establishment of Central Pharmacy Services Center workflows.





PHARMACY OPERATIONS

Inpatient services

Pharmacy Operations is responsible for ensuring the safe and appropriate use of drug products and drug-related devices throughout the Baptist Health organization. To accomplish this, staff members strive to employ concepts of good pharmaceutical care that focus on providing the right medication to the right patient at the right time.

To support these goals, Baptist Health's Pharmacy focuses on an integrated approach that coordinates both clinical and distributive functions to foster care that is consistent with evidence-based medicine. System design, staffing and clinical support are used to ensure that the department is working within the framework established to promote positive patient outcomes.

Baptist Health's Inpatient Pharmacy services are available 24/7 to dispense medications for hospital inpatient and outpatient areas, as well as provide supportive services to long-term acute care hospitals and more than 300 clinics. Except in rare circumstances, a pharmacist reviews all medication orders for safety and appropriateness.

The majority of these medications are subsequently dispensed through automated dispensing cabinets, such as the Omnicell system. All in all, pharmacies across the Baptist Health system verify and dispense **over 21,500 orders and nearly 40,000 doses each day.**

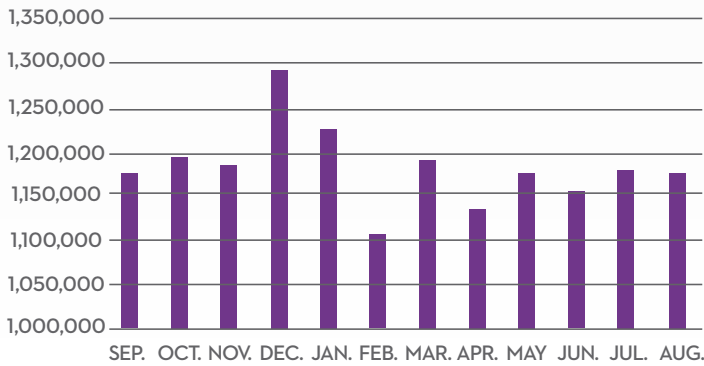
MAJOR ACCOMPLISHMENTS

- Do Not Crush list and build in Epic.
- Completed ENFit® conversion.
- Pharmacy Stars conversion.
- Revamped enhancement process.
- Standardized system override list.
- Simplist® syringe platform (decreased diversion risk).
- Scanning on administration for selected physician practices.
- Biosimilar Epic build.
- Systemwide education on USP 800 safe handling of hazardous drugs.
- Less Potent Pain Medication build and education.
- Implemented ACL at all Baptist Health hospitals.
- Risk Evaluation and Mitigation Strategies Epic (REMS) build.
- Omnicell dispensing alert standardization.
- Dispense Prep and Compounding and Repackaging within Epic.
- Technician career ladder (pay grade changes, job description standardization).

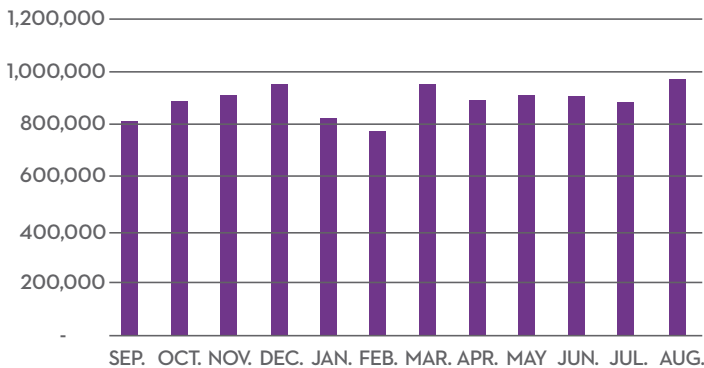


FY 2021 TO 2022

DOSES DISPENSED



ORDERS VERIFIED



Operation KPIs

Average turnaround time

- Routine orders **10 minutes**
- Stat orders **6 minutes**

Total doses dispensed

- Automation **9.2 million**
- Central Pharmacy **4.9 million**

Orders processed

- **9.9 million**

Clinical intervention

- **383,000**

Pharmacy Operations continued

Community Pharmacy services

All Baptist Health hospitals have on-site pharmacies and fill prescriptions for Baptist Health patients, discharged patients, and Baptist Health employees and families.

Community Pharmacies

- Bardstown
- Corbin
- Elizabethtown
- Madisonville
- New Albany
- La Grange
- Lexington
- Louisville
- Paducah
- Richmond

Specialty Pharmacy services

Our specialty pharmacists are dedicated to helping patients access medications that may be hard to find when treating complex or chronic medical conditions, such as cancer, multiple sclerosis, rheumatoid arthritis, hepatitis C, transplants, and others. We coordinate with providers to ensure safe, appropriate medicine at a more affordable price.

Specialty Pharmacy Clinics

Neurology

- La Grange
- Lexington

Oncology

- Corbin
- Hardin
- La Grange
- Lexington
- Louisville (Kresge)
- Louisville (Eastpoint)
- Madisonville
- New Albany

Endocrinology

- Corbin
- Lexington
- Louisville (Kresge)
- Madisonville
- New Albany

Hepatitis C/

Gastroenterology

- Corbin





MAJOR ACHIEVEMENTS

Financial success

- **60%** year-over-year increase for Community and Specialty Pharmacy Revenue.
- **50%** year-over-year increase for prescription volume for community and specialty pharmacy.
- **25%** year-over-year increase for Meds to Beds prescriptions filled by Baptist Health Community Pharmacy.
- **13%** year-over-year increase for 340B-eligible prescriptions dispensed by Baptist Health Community Pharmacy.

Expansion

- 10 new specialty clinics.
- Four new pharmacy locations.
- Central Pharmacy Services Center.
- Specialty Pharmacy Call Center.

Safety

- Cardinal Health audits for 10 Community Pharmacy locations.
- SAFE reporting to provide more global monitoring of medication events.

EXPANDING PATIENT CARE SERVICES

61,636

MEDS TO BEDS PATIENTS



INCREASE OF
OVER 15,000 PATIENTS



24% EMPLOYEE 90-DAY FILL EFFICIENCY 2.1% INCREASE →
159,049 PRESCRIPTIONS

MEDICATION THERAPY MANAGEMENT

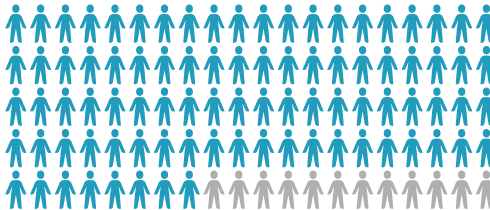
29
CMRs

296
OUTREACHES

267
TIPS

443

TARGETED
CLINICAL
INTERVENTIONS
(MTPs) RESOLVED



88% OF ELIGIBLE PATIENTS ELECTED TO ENROLL IN SPECIALTY SERVICES



AVERAGE
TURNAROUND TIME

2.6 BUSINESS DAYS

FOR SPECIALTY
PRESCRIPTIONS

10 SPECIALTY
CLINICS 



4,469

PATIENTS ENROLLED
IN SPECIALTY
PATIENT MANAGEMENT
PROGRAMS

30,277

CLINICAL
OUTREACHES
COMPLETED

IMPROVING QUALITY & COMPLIANCE



Elevating Financial Outcomes



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Optimizing Pharmacy as One Baptist



CLINICAL PHARMACY SERVICES

Pharmacists with clinical expertise in different areas of pharmacy practice work in collaboration with physicians, nurses, and other healthcare team members to provide safe and comprehensive medication management.

Clinical pharmacists participate in multidisciplinary rounding in specified specialty areas to ensure optimal medication oversight. Additionally, these pharmacists participate in development, implementation, review and enhancement of clinical pharmacy services.

MEDICATIONS REVIEWED BY PHARMACY AND THERAPEUTICS: 41



Pharmacy and Therapeutics committee

The Pharmacy and Therapeutics committee is responsible for developing and maintaining a system formulary comprised of safe, evidence-based, cost-effective medication therapy. The committee also manages policies and procedures to support safe and responsible medication usage across the system.

- New medications added to formulary: **29**
- Medications removed from formulary: **7**
- Medications evaluated and not added: **5**

Policies reviewed by Pharmacy and Therapeutics: 32

Formulary requests for 2022

Iron interchange.

System heparin infusion dosing nomogram.

Therapeutic interchange for biosimilars.

BPA-driven electrolyte replacement.

Phenobarbital for alcohol withdrawal.

Remove medications from the auto-verify list if they have “Notes to Pharmacy.”

Remove general preference list from Epic.



Epic Decision Support subcommittee

- Medication warnings reviewed/approved: **19**
- Best practice advisories (BPAs) reviewed/approved: **52**
- Order sets/standing orders/protocols reviewed/approved: **115**

Antimicrobial subcommittee

- Guideline updates: **17**
- Order updates: **5**
- Lab updates: **8**
- Other updates: **2**

ANTICOAGULATION CLINIC

Many patients with conditions such as atrial fibrillation, deep vein thrombosis, pulmonary embolism, or other hereditary conditions will require anticoagulants, also called blood thinners, to prevent clots from forming. The Anticoagulation Clinic at Baptist Health helps patients monitor and manage medications taken to prevent blood clots.

The Anticoagulation Clinic provides comprehensive care for patients who require anticoagulation therapy. A pharmacist reviews patient health history, identifies medications, evaluates the length and safety of treatment, and conducts a thorough medication reconciliation at each patient visit. Services include:

- Provision of other anticoagulation medications for patients who are not able to take warfarin (Coumadin) for brief periods due to surgical procedures.
- Point-of-care testing.
- Dosing and administration instructions for anticoagulation medications.
- Screening of patients and family members for suspected inherited predispositions to blood-clotting disorders.
- Home coagulation monitoring and management programs.
- Patient and family education.

Clinic locations

Baptist Health Lexington
Anticoagulation Clinic
1720 Nicholasville Road
Lexington, KY 40503

Baptist Health Floyd
Disease State Management
Clinic
1919 State St., Suite 100
New Albany, IN 47150

Baptist Health Louisville
Anticoagulation Clinic
4000 Kresge Way
Louisville, KY 40207

Baptist Health Corbin
1 Trillium Way
Corbin, KY 40701

System numbers

Pharmacists: **6**

Pharmacy technicians: **5**

Number of patient encounters

2,300+ in-clinic encounters

13,500+ remote encounters

27,000+ warfarin encounters

43,000+ patient encounters

Number of patients on anticoagulation medication

Coumadin **4,300+**

Pradaxa **394**

Xarelto **7,400+**

Apixaban **19,000+**

Lovenox **3,100+**



340B PROGRAM

The program allows 340B hospitals to stretch limited federal resources to reduce the price of outpatient pharmaceuticals for patients and expand health services to the patients and communities they serve. Hospitals use 340B savings to provide free care for uninsured patients, offer free vaccines, provide services in mental health clinics, and implement medication management and community health programs.

By the numbers

- **22,747** claims audited at Hardin.
- **3,960** system claim audits.
- **\$150 million** in 340B savings.
- **\$2.31 million** in contract pharmacy revenue.

Compliance initiatives

- SectyrHub 340B compliance software.
- Centralized audit tracking.

Disproportionate Share Hospital (DSH) program – percentage by site for FY22

Corbin	37.57%	Madisonville	19.98%
Hardin	13.60%	Paducah	12.97%
La Grange	12.80%	Richmond	22.27%
Lexington	13.27%		



PHARMACY OPERATIONS



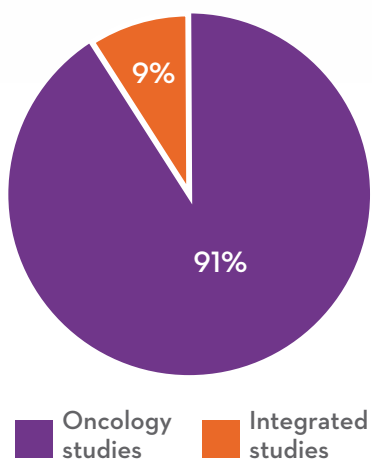
RESEARCH

Research pharmacists across Baptist Health oversee the proper procurement, storage, monitoring, dispensing, disposal and accountability of investigational medications. Research pharmacists, in collaboration with the Baptist Health Research team, ensure clinical trials involving medications are conducted safely and appropriately while adhering to all federal and local laws, regulations, and requirements set forth by the study sponsor protocol.

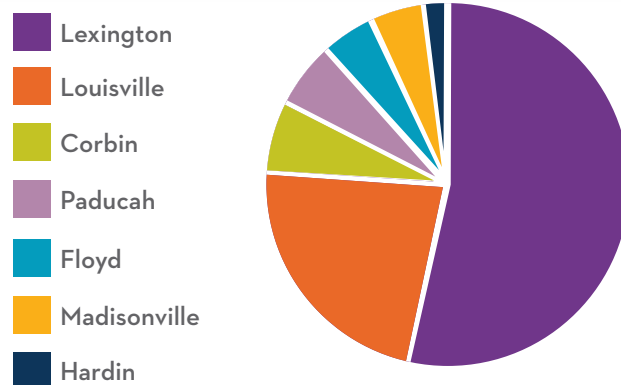
Baptist Health has:

- 175 clinical trials across 14 locations in two states.
- 41 new clinical trials throughout the year.
- Created an Investigational Research Pharmacy SharePoint folder with standardized documents and educational resources available to all pharmacists.
- Standardized processes across all sites and developed a systemwide policy and procedures.
- Baptist Health Research Green Belt project to establish a leaner study start-up process.

STUDIES BY TYPE



STUDIES WITH MEDICATIONS BY SITE (N=189)



Pharmacy Operations continued

Technology and analytics

IT Pharmacy Applications supports numerous IT vendor solutions across the enterprise, leveraging technology to support medication use and improve safety, efficiency and patient care.

IT Pharmacy Application teams include Pharmacy Automation, Willow Inpatient, Willow Community Pharmacy, Willow Compass Rose, and Willow Pharmacy Billing. These teams support nine hospital pharmacies, 10 community pharmacies, more than 200 specialty pharmacy clinics, and nearly 600 automation devices.

Applications supported

- Epic applications
 - Willow Inpatient
 - Willow Ambulatory
 - Willow Inventory
 - Compass Rose for specialty pharmacy
- Omnicell®
- BD Pyxis™
- AcuDose-Rx®
- Enliven Health®
- InsightRx

- Change Healthcare
- Wolters Kluwer
 - Medi-Span®
 - Lexicomp®
 - UpToDate®
- First Databank specialty pharmacy content
- Glucomander™
- ActX pharmacogenomics
- TempTrak™

Automation supported

Medication management automation

- 431 Omnicell devices.
- 71 BD Pyxis devices.
- 22 AcuDose-Rx devices.

Databases

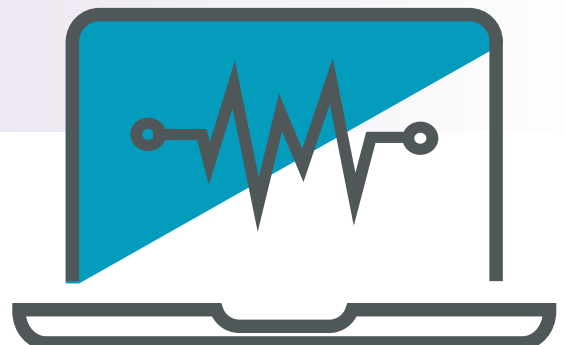
- New cabinets installed – 13.
- Scheduled reports – 436.
- Restocks completed – 132,860.
- Items added/updated – 11,613.
- Kits added/updated – 31.
- User maintenance – 3,608 users added, 1,547 users removed.

Omnicell

- AnywhereRN™.
- SinglePointe®.
- Closed-loop anesthesia delivery system.
- Interoperability.
- Analytics.
- Patient-specific bins.

Our pharmacy electronic health record build supported:

- **7,155** individual medication records.
- **85** best practice advisories (BPAs).
- Medication warnings.
- Medication record maintenance.
- **496** order sets/protocols/standing orders.
- **187** completed enhancement requests.
- **20** specialty/medication therapy management/Disease State Management.



2022 PROJECT HIGHLIGHTS

Enterprise

- Epic May 2022 upgrade.
- Workflow changes and Epic tools to satisfy REMS requirements.
- Baptist Health ER and Urgent Care
 - Jefferson Ridge
 - Blankenbaker Parkway
- SlicerDicer data tool in Epic.
- Lexicomp medication reference tools.

Omnicell Automation

- Closed-loop anesthesia
- Anesthesia barcoding
- 25.5 upgrade

Willow Community Pharmacy

- Rover for Willow Inventory.
- RightFax Integration for Willow Ambulatory.

Willow Compass Rose

- Compass Rose for Specialty Pharmacy. Baptist Health was the first Epic customer to go live with this module.
- Value-based pharmacy benefits manager tools for population health workflows.

Willow Inpatient

- Glucommander.
- Electrolyte replacement BPA workflow.
- CBORD integration – Epic integration with dietary application.



PHARMACY RESIDENCY PROGRAMS

Baptist Health Pharmacy offers postgraduate year one (PGY1) Pharmacy Residency programs at six locations and a postgraduate year two (PGY2) Ambulatory Care Pharmacy Residency program at Baptist Health Louisville.

PGY1 and PGY2 Pharmacy programs are accredited by the American Society of Health-System Pharmacists and build on the doctor of pharmacy education. There are 19 PGY1 positions and one PGY2 position available across the system. The Pharmacy team strives to contribute to the development of clinical pharmacists responsible for medication-related care for patients with a wide range of conditions, who are eligible for board certification and prepared for postgraduate PGY2 pharmacy residency training.

PGY1 Pharmacy Residency programs

Baptist Health offers two unique PGY1 residency programs – a PGY1 Pharmacy Residency program and a PGY1 Community-Based Pharmacy program.

The PGY1 Pharmacy Residency program, offered at Baptist Health’s Corbin, Floyd, Hardin, Lexington, Louisville and Paducah hospitals, is designed to enable the resident to engage in progressive pharmacy services in a variety of clinical settings for an acute care regional hospital. The resident is exposed to clinical and professional elements important to current practices of pharmacy.

In addition to rotations and longitudinal activities, responsibilities include: disease state management; interdisciplinary patient care; drug policy development and implementation and education of pharmacy students, patients and healthcare providers; participation in committee meetings and initiatives; and conducting valuable research to improve pharmacy services.

Resident experiences are customized and adapted throughout the year to allow students to meet their individual goals. Residency preceptors challenge the resident to excel in a supportive community environment and prepare them to be future leaders in the pharmacy profession.

The PGY1 Community-Based Pharmacy program, offered at Corbin, develops community-based pharmacist practitioners with diverse patient care, leadership and education skills. Residents engage in direct patient care within the following ambulatory clinics: endocrinology, anticoagulation, heart failure, oncology, medication therapy management, mental health and gastroenterology. Transitional care exposure is an area of focus that the community-based pharmacy resident will manage throughout the residency program.



PGY2 Ambulatory Care Pharmacy Residency program

The PGY2 Ambulatory Care Pharmacy Residency program is sponsored jointly by Baptist Health Louisville and Sullivan University College of Pharmacy and Health Sciences, and it has an accreditation candidate status with ASHP. The PGY2 Ambulatory Care Residency program is a 52-week training program that is primarily longitudinal in nature.

Current residents

Baptist Health Corbin

Noah Dixon, PharmD, University of Kentucky

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Effect of clonidine on weaning prolonged dexmedetomidine infusions in the critical care setting

Lyric Morton, PharmD, University of South Carolina

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Clinical outcomes of incretin mimetic drugs used for weight loss in a pharmacist-run clinic

Jennifer Cherian, PharmD, University of Arizona

Residency specialization: PGY1 Community Based Pharmacy Residency program

Residency project: Implementing inclisiran in pharmacist-led medication management clinic

Karla Salnoris, PharmD, Shenandoah University

Residency specialization: PGY1 Community Based Pharmacy Residency program

Residency project: Impact of pharmacist involvement and management in patients with diabetes that are enrolled in an outpatient endocrinology clinic

Baptist Health Floyd

Kitana Caesar, PharmD, St. Louis College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Impact of a pharmacy-driven vaccination intervention in adult warfarin patients managed in an ambulatory medication management clinic

Kyle Hunter, PharmD, Purdue University

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Comparison of three models for predicting drug resistant pathogens in patients with community-acquired pneumonia in a community hospital

*Pharmacy Residency Program continued***Baptist Health Hardin***Taylor Johnson, PharmD, MBA, University of Kentucky*

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of the safety and efficacy of tenecteplase versus alteplase for treatment of acute ischemic stroke in a community hospital setting

Baptist Health Lexington*McKenzie Abu Taha, PharmD,**University of Kentucky College of Pharmacy*

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of scheduled versus nursing-driven electrolyte replacement on adherence to replacement protocols in a community hospital setting

Gustav Benson, PharmD, University of Kentucky College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: An evaluation of patient outcomes related to the receipt of alteplase versus tenecteplase for acute ischemic stroke in a community hospital

Bethany Fuchs, PharmD, University of Kentucky College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Optimizing workflow for sterile compounding pharmacy technicians in an inpatient pharmacy

Johann Mani, PharmD, University of Kentucky College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of cephalosporin use after pharmacist-driven education on beta-lactam allergy cross-reactions and electronic health record alert suppression in a community hospital

Cody Sullivan, PharmD, MBA, University of Kentucky College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of the incidence of hypoglycemia after implementation of an electronic glucose monitoring system in a community hospital setting

Stephen Tipton, PharmD, University of Kentucky College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of the effect of pharmacy-driven education and peer comparison on the amount of opioids prescribed at discharge in a community hospital



Baptist Health Louisville

Natalie Hack, PharmD, Sullivan University College of Pharmacy and Health Sciences

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Effect of computerized glycemic management systems on time to resolution of diabetic ketoacidosis

Sarah Lewis, PharmD, University of Kentucky College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Incidence of rituximab infusion reactions in rituximab primed vs. saline primed lines

Michelle Murphy, PharmD, University of Tennessee Health Science Center College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Epidural-induced hypotension during labor and delivery: incidence and risk factors

Daniel Ehringer, PharmD, MBA, Sullivan University College of Pharmacy and Health Sciences

PGY1: Indiana University Health Arnett

Residency specialization: PGY2 Ambulatory Care Pharmacy Residency

Residency project: Use of remote patient monitoring kits to reduce hospitalization and mortality rates for patients with heart failure

Baptist Health Madisonville

Sally Hancock, PharmD, Belmont University College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of a specialty pharmacy mail order service

Lauren Hayes, PharmD, Belmont University College of Pharmacy

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluation of a pharmacist's impact on intravenous antimicrobial prescribing at discharge

Baptist Health Paducah

Meredith Johnson, PharmD, Union University, Jackson, Tennessee

Residency specialization: PGY1 Pharmacy Residency program

Residency project: Evaluating outcomes of pharmacist-driven intervention on total parenteral nutrition management

STEWARDSHIP PROGRAMS

OPIOID STEWARDSHIP

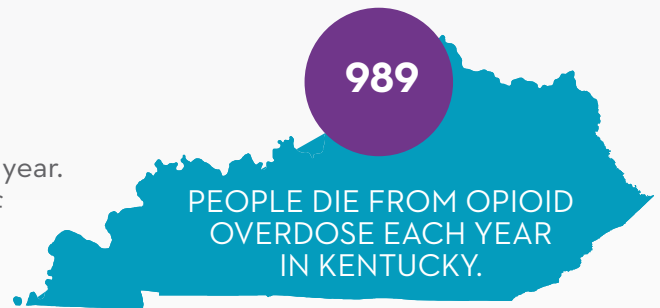
The opioid epidemic continues to result in significant morbidity and mortality even within hospitals where opioids are the second most common cause of adverse events.

Opioid stewardship represents one model for hospitals to promote the safe and rational prescribing of opioids to mitigate preventable adverse events. Our commitment is to prescribe safely so the right patient receives the right opioid for the right indication at the right dose and length of treatment.

Epidemic facts

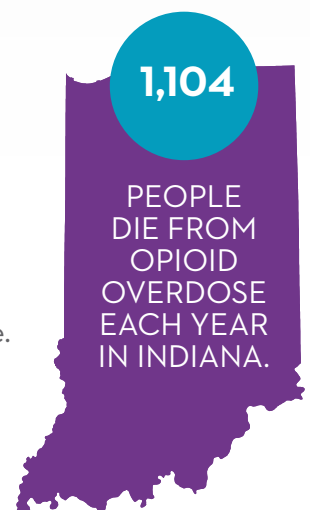
Kentucky

- 989 people die from opioid overdose each year.
- Prescription opioids are a factor in 31.9% of opioid overdose deaths.
- Heroin is a factor in 14.2% of deaths.
- 75.2% of deaths involve synthetic opioids.
- Opioids are a factor in 75.2% of all overdose deaths.
- More than 23 of every 100,000 residents die from an opioid overdose.
- 60.3% more than the national death rate.
- 2.36% of hospital births are cases of neonatal opioid withdrawal syndrome.
- Doctors write enough prescriptions for 79.5% of residents to have one.
- 42,500 cases of hepatitis C are attributed to intravenous drug use.
- 7,108 cases of HIV/AIDS are attributed to intravenous drug use.



Indiana

- 1,104 people die from opioid overdose in one year.
- Prescription opioids are a factor in 33.5% of opioid overdose deaths.
- Heroin is a factor in 28.2% of deaths.
- 64.6% of deaths involve synthetic opioids.
- Opioids are a factor in 67.8% of all overdose deaths.
- More than 17 of every 100,000 residents die from an opioid overdose.
- 19.9% above the national death rate.
- 1.04% of hospital births are cases of neonatal opioid withdrawal syndrome.
- Doctors write enough prescriptions for 65.8% of residents to have one.
- 40,200 cases of hepatitis C are attributed to intravenous drug use.
- 11,218 cases of HIV/AIDS are attributed to intravenous drug use.



Baptist Health Opiate Safety Endurance (BOSE) task force

Baptist Health's BOSE stewardship program consists of a multidisciplinary group of physicians, pharmacists, nurses, safety and quality specialists, and other leaders across the health system.

Acute pain management performance indicators

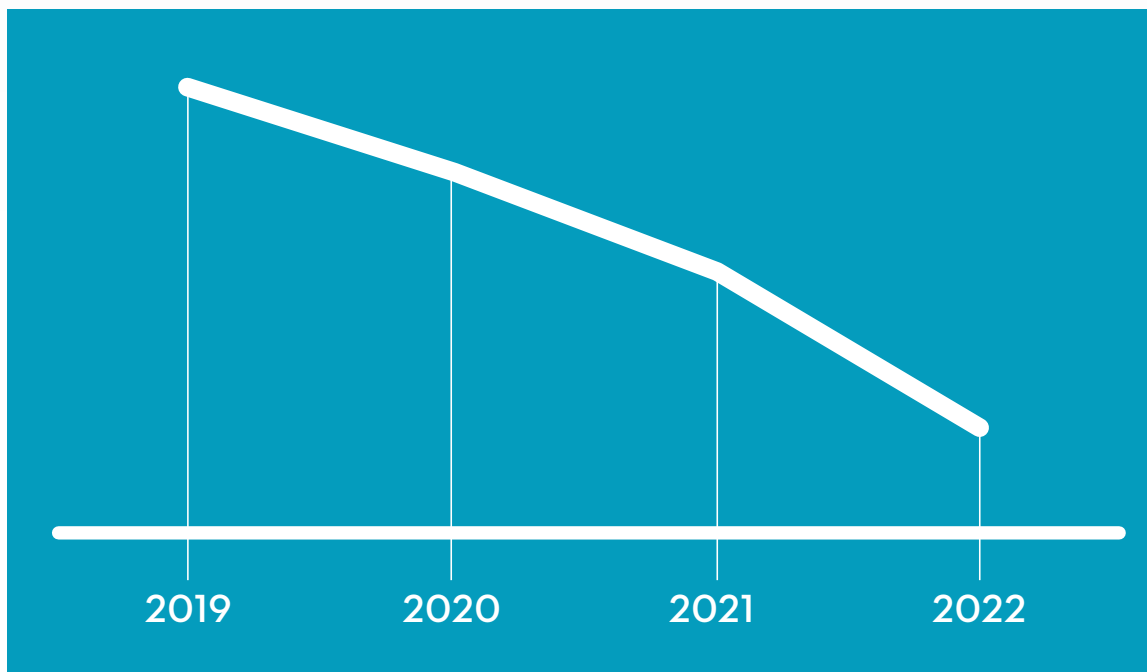
- Average total MME per prescription.
- MME per opioid prescription.
- Percentage of patients discharged with prescriptions that received an opiate.
- Average MME dose administered per inpatient day.

Harm-reduction performance indicators

- Percent of patients with opioids and benzodiazepines co-prescribed.
- Naloxone prescribed for opioid overdose or high-risk patients.
- Opioid prescription > 90 MMEs daily.
- Proportion of hospitalized patients administered naloxone.

Morphine milligram equivalents (MME)

- MME represents how many milligrams of morphine equals the dose of the prescribed medication.
- MMEs are increasingly being used to indicate abuse and overdose potential and to set thresholds for prescribing and dispensing of opioid analgesics.
- 30-point reduction in the average total MME/prescription.



Stewardship Programs continued

Controlled Substance Diversion Prevention program

The Controlled Substance Diversion Prevention program at Baptist Health includes three core controls.

Administrative-level controls

- Legal
- Regulatory
- Organization oversight
- Accountability

Individual-level controls

- Chain of custody
- Storage and security
- Prescribing and administration
- Returns, waste and disposal

System-level controls

- Human resources management
- Automation and technology
- Monitoring and surveillance
- Investigation and reporting

Closed loop analytics

Baptist Health introduced closed-loop analytics between its Epic electronic health record and automatic dispensing cabinet (ADC) anesthesia workstations. This innovation automated controlled substance reconciliation, increasing compliance, saving time, and enhancing patient safety.

By adopting a ready-to-administer syringe in secure, tamper-evident packaging pharmacy, Baptist Health met its objective of optimizing the clinical workflows surrounding the delivery of IV push morphine, hydromorphone and fentanyl while reducing the risk of diversion.

Baptist Health participates in the Kentucky and Indiana Prescription Drug Monitoring program.



79% reduction in overall hydromorphone HCl waste events

42% reduction in overall fentanyl citrate waste events

Drug safety

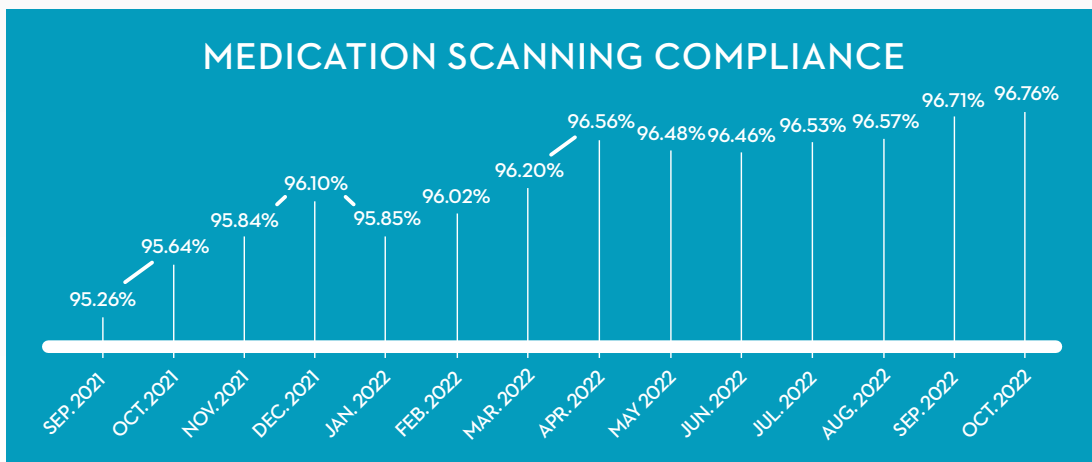
Medication Safety committee

Baptist Health is a high-reliable organization focused on a culture of safety and process excellence. Baptist Health's Medication Safety committee works to evaluate, assess and include a method to address each of the procedures and systems within the medication management system and identify system improvements that could prevent errors. The Medication Safety committee is responsible for reviewing, recommending and/or implementing enhancements and process improvements that promote the safe use of medications.

The committee is a multidisciplinary team that includes physicians, pharmacists and nurses, as well as risk management, clinical informatics and performance improvement staff.

Bar code medication administration

Bar code medication administration systems are electronic scanning systems that intercept medication errors at the point of administration. Baptist Health has seen an approximate 2% increase in its bar code medication administration compliance since the previous fiscal year.



Standardized medication override list

Developed a sustainable process for preventing unauthorized and inappropriate override medication dispensing from automated dispensing cabinets, which resulted in a 46% reduction of in the total number of medications available for override systemwide.

Adverse drug reactions

An adverse drug reaction is an unwanted or harmful reaction experienced after the administration of a drug or combination of drugs under normal conditions of use, which is suspected to be related to the drug. The pharmacy heightens the awareness of specific adverse drug reactions, discusses methods of prevention, and promotes reporting of these events.

Safe medication disposal

Baptist Health community and hospital pharmacies offer safe drug disposal services, which provide a safe way to remove expired, unwanted or unused medicines from the home and reduce the chance that others may accidentally take the medicine. In fiscal year 2022, Baptist Health sites safely disposed of more than 2,500 pounds of medications.

Stewardship Programs continued

Look-alike, sound-alike medications

39 “look-alike, sound-alike” medications strategies in place to prevent look-alike, sound-alike medication errors.

High-risk medications

High-risk medications are drugs that bear a heightened risk of causing significant patient harm when they are used in error.

‘Good Catch!’

The Pharmacy reviews and analyzes medication pharmacy-related “Good Catches” to improve patient safety and enhance the culture of safety. Near misses, or “Good Catches,” are patient safety events that have the potential to cause harm, but did not reach the patient.

Error-reduction strategies:

- Evaluate medication systems and practices with the primary goal of preventing patient harm due to medication errors.
- Continuous process and system improvements provide many possibilities for enhanced medication safety in prescribing, dispensing and administering medications.
- Implement medication safety technology.
- Education.
- Review and implement medication safety recommendations of the Institute for Safe Medication.





Antimicrobial Stewardship Program

The Antimicrobial Stewardship Program consists of a **multidisciplinary group of 80** infectious disease and non-ID pharmacists and physicians, microbiology specialists and other leaders across the health system.

The Baptist Health Antimicrobial Stewardship program **has six antibiogram-driven, indication-specific order sets and 13 literature-driven guidance documents** on the most common infections and antimicrobial dosing.

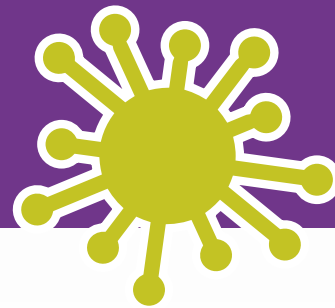


During the pandemic, the program **updated the COVID-19 Treatment Guidelines 35 times in accordance with the newest clinical recommendations** published following review of hundreds of peer-reviewed and non-peer-reviewed articles.

Six months after the Antibiotic Use in COVID-19 Patients education initiative began, Baptist Health observed a **5% reduction in antibiotic use overall.**

\$1.5
MILLION

Over the last year, there has been a **\$1.5 million reduction in total antibiotic cost** systemwide.



40%

Since the initial go-live of our antibiotic allergy assessment program, **aztreonam use has decreased by 40% across the health system.**

There have been **18,818** antimicrobial stewardship interventions made by a pharmacist in FY 2022,

and 78% of them were accepted by the provider.

Notable interventions:

Allergy clarification	403
De-escalation	1,820
Discontinuation	2,890
New-dose optimization	2,484
Drug info consult	1,328
Duration adjustment	991
New-ER-culture follow-up	2,498
Therapy change	1,342

POPULATION HEALTH AND VALUE-BASED CARE

HUMANA

Rx Measure Name	2019	2020	2021
SPC-Statin	83	81.8	84.3
SUPD	79	79.2	82.1
Med Adh Statins	86	88.9	87.5
Med Adh Diabetes	87	87.9	87.4
Med Adh ACE or ARB	87	89.1	88.8

UNITED HEALTHCARE

Rx Measure Name	2019	2020	2021
SPC-Statin	71	77	86
SUPD	76	77	83
Med Adh Statins	84	88	87
Med Adh Diabetes	84	87	89
Med Adh ACE or ARB	88	90	89

ANTHEM MA

Rx Measure Name	2019	2020	2021
SPC-Statin	N/A	82.2	85.84
SUPD	79.48	78.73	82.53
Med Adh Statins	81.9	84.91	84.47
Med Adh Diabetes	79.8	82.3	82.64
Med Adh ACE or ARB	82.8	84.95	85.16

In the United States, cardiovascular disease is the leading cause of death. People with diabetes have a higher cardiovascular risk, which is believed to be attributable in part to high cholesterol levels. Those with high cholesterol levels are at a high risk for developing atherosclerotic cardiovascular disease.

For patients with one or more cardiovascular disease risk factors, the American College of Cardiology and American Heart Association suggest treatment with high- or moderate-intensity statin therapy. In addition, they recommend lifestyle therapy for diabetic and atherosclerotic cardiovascular disease patients of all ages. The American Diabetes Association advises moderate-intensity statin medication for patients with diabetes who do not have atherosclerotic cardiovascular disease between the ages of 40 and 75, regardless of baseline LDL levels.

The American College of Cardiology and American Heart Association recommend beginning high-intensity (or maximum tolerated) statin medication in all patients younger than 75 years with cardiovascular disease, regardless of their baseline LDL levels.

Statins help the lining of the blood vessels work more effectively, improve the stability of atherosclerotic plaques, reduce inflammation and oxidative damage to cells, and prevent blood platelets from clumping, therefore reducing the risk of blood clots.

MARKET ACCOMPLISHMENTS

Baptist Health Corbin

- Expanded specialty services to include hepatitis C, heart failure and behavioral health.
- Expanded Emergency Department pharmacy services to review all medication orders and culture results.
- Developed an Opioid Stewardship charter with monthly meetings and focused initiatives.
- Earned DNV accreditation with noted excellence in antimicrobial stewardship.
- Expanded pharmacy residency to include community-based PGY1 program.

Baptist Health Floyd

- 59,469 prescriptions dispensed.
- 70% Meds to Beds capture rate.
- 1.3 million orders processed.
- 1.9 million doses dispensed..
- 56% of system interventions.
- Developed a pharmacy course for nursing targeted toward new hires and new graduates.
- Implemented transitions of care pharmacy service.
- Implemented Glucomander™ SubQ for glycemic management.

Baptist Health Hardin

- Established PGY1 Pharmacy Residency program.
- Created infectious disease specialist position.
- Implemented Glucomander™ SubQ for glycemic management.
- \$16.4 million in 340B program savings.
- Audited more than 23,000 claims.

Baptist Health La Grange

- Established a pharmacy at Eastpoint Surgery Center.
- Initiated medication therapy management services for new neurology clinic.
- Successful Joint Commission survey for hospital and all outpatient infusion centers.
- 340B savings of \$44 million.

Baptist Health Lexington

- Achieved URAC specialty pharmacy accreditation.
- \$40 million in 340B savings.
- Meds to Beds volume increased by 57%.

Market Accomplishments continued

Baptist Health Louisville

- Achieved Neonatal Intensive Care unit level 3 accreditation.
- Earned sepsis certification from The Joint Commission.
- Recognized as an Antimicrobial Stewardship Center of Excellence.
- Expanded clinical pharmacy services with night shift Emergency Department support and 24-hour code blue response.
- Prepared to support free-standing emergency department and urgent care off Blankenbaker Parkway.
- Increased medication therapy management performance by 49%.

Baptist Health Paducah

- Implemented on-site clinical pharmacist services for Heart Failure Clinic.
- 41.3% increase in pharmacy driven medication reconciliation on admission.
- 6.7% reduction in antibiotic days of therapy.
- \$10 million in 340B program savings.
- Established PGY1 Pharmacy Residency program.
- 12.6% increase in Meds to Beds capture at discharge.

Baptist Health Richmond

- Expanded Ambulatory Care Clinic.
- Opened post-discharge pulmonology and heart failure clinics and expanded Behavioral Health services.
- Initiated pharmacy-driven heparin protocol.
- A pilot site for the new electrolyte replacement best practice advisory.
- \$1 million in patient assistance.

Baptist Health Deaconess Madisonville (joint venture)

- Expanded endocrinology and oncology Specialty Pharmacy services.
- Reduced daily morphine milligram equivalents per prescription through opioid stewardship efforts.

