



WELCOME FROM THE DIRECTOR OF PHARMACY)

Joan Haltom, PharmD

Greetings from our Pharmacy Team! This annual report highlights the important contributions made by pharmacy team members to our organization and profession. Ephraim McDowell Health may be a small regional health system but we have big ideas driven by our F.I.R.S.T. values. As System Director of Pharmacy Service for Ephraim McDowell Health, my primary goal is to develop sustainable pharmacy service lines that promote high-quality patient care, outcomes and safety. If it is within our scope of practice as pharmacists to be involved in patient care initiatives or services, then our Ephraim team will be! Our decentralized model of clinical care provides the optimal impact for our providers, clinical staff and patients. Our PGY1 Residency program and community faculty appointments with several colleges of pharmacy promote the lifelong learning commitment of our pharmacist preceptors. Our shared governance model for Clinical Roundtable and Operations has allowed us to maximize the contributions of our whole team. The development of Clinical Achievement Pathways for pharmacists and technicians along with our new level system for advanced practice certified pharmacy technicians has created a very goal-oriented team who work to advance their own professional practice, clinical skills, community service and leadership. Our use and adoption of technology helps us efficiently mine and analyze data that improves our ability to treat patients, maximize safety of our patients and be fiscally responsible.

2017 was a busy year with successful Joint Commission surveys at Ephraim McDowell Regional Medical Center and Ephraim McDowell Fort Logan Hospital. We had a successful American Society of Health-System Pharmacist (ASHP) post graduate year 1 (PGY1) Residency Accreditation survey, HRSA 340b program integrity and DEA audits at EMRMC. We implemented a more robust Antimicrobial Stewardship Plan with 48-hour time-outs for antibiotic use reviews and adoption of Biofire technology. We converted to new 340b split billing software and expanded contract pharmacy agreements. We developed and tested new MedKeeper technology and began

conversion from Safety Surveillor to Theradoc clinical decision support system. Pharmacists helped meet HCAHPS communication about medication goal by enhanced medication counseling and admission med reconciliation efforts. We were awarded the Kentucky Society of Health-System Pharmacist (KSHP) Innovative Pharmacy Practice Award for our advanced certified technician level program. We expanded our Ambulatory Clinical Collaborative Practice Agreements. The Clinical Roundtable team collaboratively developed or revised over 65 policies, protocols or processes. All Pharmacy cost centers met budget goals for contribution margins and productivity targets of >95-100%. And we took time to celebrate individual milestones and life events important to our Associates: a record number of new babies this year (8), three weddings, and professional publication of research (2). Our Associate accomplishments and roles include: Board Certified Pharmacotherapy pharmacists (BCPS) (10), Board Certified Ambulatory Care Pharmacist (BCACP) (1), ASHP PGY1 match (2) and completion (2), F.I.R.S.T. Preceptor recognition awards (2), Certificate of Teaching and Learning (8), Diabetes Management Certificate Training program (5), Naloxone dispensing (4), ASHP PGY1 Accreditation Surveyor (1), American College of Cardiology (ACC) Cardiovascular Team State Liaison for the Kentucky Chapter (1), Ephraim McDowell Leadership Academy (1), 19 Pharmacists and 5 Technicians earning CAP designations, and 5 Certified pharmacy technicians completed advanced skills level training.

Every year we are asked by residency candidates what we like best about our jobs here at Ephraim. The answers are pretty consistent no matter who is asked:

- 1) The people we work with
- 2) The collaborative and supportive culture within the pharmacy
- 3) The empowerment and level of opportunity provided to do what we do best

I am proud of the work we do here at Ephraim McDowell Health!

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MISSION, VISION & VALUES>>

Our Vision

Ephraim McDowell Health will be the health care provider of choice, focusing on advancing the health and quality of life for the communities we serve.

Our Mission

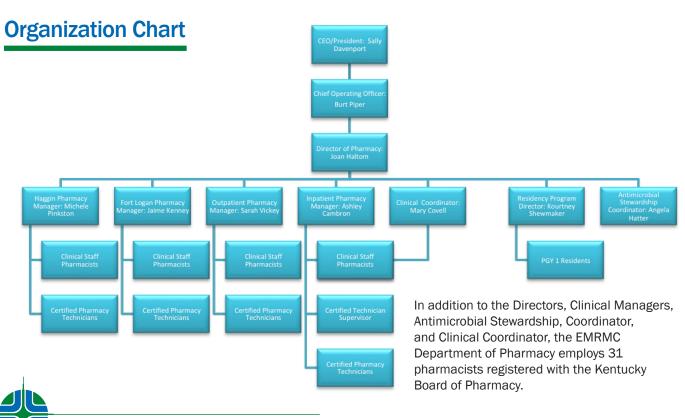
Ephraim McDowell Health is committed to providing a healing environment in the communities we serve, built on best people, practices and performance.

Our Values - F.I.R.S.T.

- Friendliness: An environment filled with compassion, care and concern
- · Innovation: The freedom and challenge to seek and apply new knowledge
- Respect: The recognition of each person as a valued, unique individual
- Service: A commitment to excellence in everything we do
- Trust: Adhering to principles that foster honesty, integrity, confidence and safety

Pharmacy Department Mission Statement:

The mission of the Ephraim McDowell Regional Medical Center Pharmacy Department is to provide distributive and clinical pharmaceutical services in an innovative practice model employing the best people and practices to support Ephraim McDowell Health's mission of providing a healing environment in the communities we serve.



OVERVIEW OF SERVICES

- Pharmacy services are provided to all inpatients and outpatients of the medical center through the Ephraim McDowell Regional Medical Center inpatient and outpatient pharmacies, Ephraim McDowell Commonwealth Cancer Center, and Ephraim McDowell Fort Logan Hospital Pharmacies. The patient populations served range from neonates to geriatrics. Pharmaceutical care is provided to each of our patients by comprehensive medication use assessment intended to optimize drug therapy for specific patient needs and minimize adverse events.
- · Pharmacy dashboard outlines FY goals and is informed by the Organization Strategic Plan for the year, in addition to pharmacy department goals and initiative. Performance improvement data is gathered and reported to department as a virtual dashboard on our shared drive as well as physical dashboard on the bulletin board in our department breakroom.

Highlights of new additions to the 2018 dashboard include:

- Discharge medication counseling for heart failure patients
- Reduce duplicate insulin pens dispensed
- No duplicate analgesic orders
- Pharmacist call to patient within 72 hours of new oral chemo start
- Alteplase IV is administered to ischemic stroke patients within 60 minutes
- High risk sterile products have RPH real time verification
- Medication scan rates to prevent errors



Relationships		
Dashboard Item	Department Goals	Department Results
Overall Associate Job Satisfaction (Excellent Score)	40%	56%
Medication Counseling at Discharge by pharmacist/ interns	27%	34.13%
Operational Effectiveness		
Wholesaler orders on WAC < 20% drug spend	< 20%	13.7%.
Contribution margin (meets/ exceeds budget)	71.1%	71.99%
Clinical Effectiveness		
AMT: Recommendation made @ 48 hours	90%	60%* *improved from 33.3% in October to 96% in August
Timely intervention for Biofire RDT interventions (2 hour goal)	90%	82.2%
Antimicrobial Spend per Adj. Patient Day	10% reduction	14.72%%
Admission Med Rec completed for ED admission by RPH or CPHT prior to admit	75%	71.8%
Outpatient adherence rates for prescribed Cholesterol meds	80%	83%
CMR completion or MTM outpatient (3rd party pts)	75%	29.4%
Safety		
Housekeeping (mop) completed daily for Clean Room	100%	99.7%
Housekeeping (mop) completed daily for CSC	100%	100%
Monthly cleaning of Clean Room documented as complete	100%	91.7%
ACC patients achieve INR in therapeutic goal range	70%	69%
No duplicate orders after RPH verification/profile review	90%	93.3%

OVERVIEW OF SERVICES>>

Services of our department include (but are not limited to):

- Preparing, labeling, and dispensing oral, topical and intravenous medications
- Pharmacist review and verification of physician order entry of medications
- · Pharmacist entry of nursing telephone medication orders
- · Clinical pharmacokinetics consult service
- Monitoring of medication therapy, including individualization of drug therapy for patients IV to PO conversion, core measure compliance, and anticoagulation safety
- Patient care rounds ICU, Cardiovascular, and Med Surg patient care areas
- Adult, Pediatric and Neonatal Emergency Response
- · Pharmacist led Antimicrobial Stewardship Program
- Drug information resource for inpatient and clinic health care providers

- Anticoagulation Clinic which manages anticoagulation drug regimens for patients through collaborative care agreements with providers
- Administration of immunizations as well as the administration and reading TB skin tests
- · Naloxone education and dispensing
- Discharge Prescription Concierge Service
- Supervising all medication-storage and preparation areas throughout EMRMC and EMFLH
- Medication Reconciliation Service
- Providing patient and family medication education
- Delta Transition of care discharge follow-up program for at-risk readmission populations
- Educating medical center Associates and medical staff,
 PharmD candidates and Post Graduate Year One (PGY1)
 pharmacy residents, pharmacy technicians and students
- Transition of care consults for continuity of medication orders for patients moving from acute care to Fort Logan swing bed admissions

HIGHLIGHTS BY F.I.R.S.T. VALUES (FY 2017)>>>

Friendliness: An environment filled with compassion, care and concern

- Participation with community outreach:
 - Community based health screenings/ medication brown bag events
 - Harrodsburg Christian Church (Disciples of Christ)
 - Trinity Episcopal Church Danville KY
 - Health Occupations Today Expo
 - Drive through clinic/flu shots
- Department Comraderies



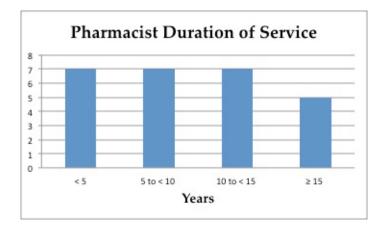
Halloween costumes — dress up as your favorite drug!



Baby-shower parenting activity winners! One of several showers held this fiscal year for the eight babies the department welcomed!



Departmental Commitment: 73% of pharmacists have been members of the department for >5 years:



Pharmacy Department Turnover: Improved retention attributed to technician ladder – halving our turnover rate!

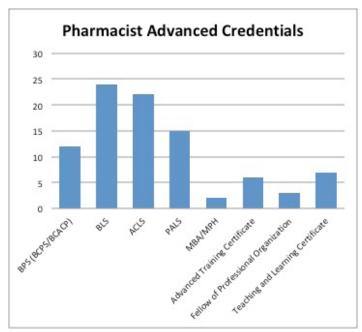
- FY2016 = 26.07%
- FY2017 = 11.19%

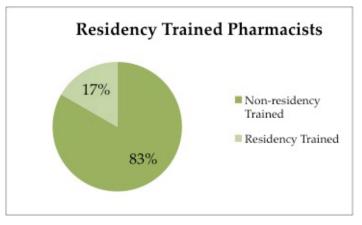
Innovation: The freedom and challenge to seek and apply new knowledge

100% of pharmacists have at least one advanced credential:

- Board of Pharmacy Specialties (BPS)
 - Board Certified Pharmacotherapy Specialist (BCPS)
 - Board Certified Ambulatory Care Pharmacist (BCACP)
- Advanced Cardiovascular Life Support (ACLS)
- Basic Life Support (BLS)
- Fellow of professional organization
- Pediatric Advanced Life Support (PALS)
- Master of Business Administration (MBA)
- Master of Public Health (MPH)
- Making a Difference in Infectious Disease Certification (MAD-ID)

- Society of Healthcare Epidemiology of America Antimicrobial Stewardship Training (SHEA)
- Teaching and Learning Certificate



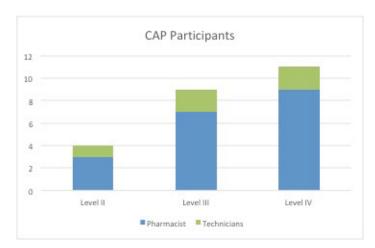


2017 Publications:

- Smetana KS, Dunne J, Parrott K, Davis GA, Collier AC, Covell M, Smyth S. Oral factor Xa inhibitors for the treatment of left ventricular thrombus: as case series. J Thromb Thrombolysis. 2017 Nov;44(4):519-524. doi: 10.1007/s11239-017-1560-7
- DeAtley HN, Burton A, Fraley MD, Haltom J. Evaluation of the Effectiveness of Two Morphine Protocols to Treat Neonatal Abstinence Syndrome in a Level II Nursery in a Community Hospital. Pharmacotherapy. 2017 Jul;37(7):856-860.

Clinical Achievement Pathway (CAP) participants

The Department of Pharmacy CAP program is a component of the pharmacy development pathway at EMH. Its focus is the advancement of pharmacists and technicians who recognize the technical and clinical expertise that is beneficial to those EMH serves. The program provides eligible pharmacists and technicians with the option to progress to higher levels of clinical and professional pharmacy practice. These levels are achieved through accomplishment of defined criteria described in the Clinical Achievement Pathway Criteria Matrix. From 2017, 96% of CAP applicants successfully completed the program and achieved their designated Level II, III, or IV.







Departmental Award

Kentucky Society of Health-System Pharmacists Innovative Health-System Pharmacy Practice Award for Development of an Advanced Technician Career Ladder



Our Certified Techs who have completed the Career Ladder!



Accepting the award at Fall 2016 KSHP Meeting in Lexington, KY



Respect: The recognition of each person as a valued, unique individual

Each month, a technician is peer-voted as "Technician of the Month". Recent winners include:

- · Kim Adams, CPhT
- · Shawn Berry, CPhT
- · Crystal Boyd, CPhT

Sutton Spirit Award is awarded to a peer-nominated pharmacist monthly. Ron Sutton was a pharmacist who retired from EMRMC in 2010 and who epitomized our F.I.R.S.T. values, was genuine in his concern and love for his coworkers and patients, and was always a positive influence and contributor to our work environment and his EMH team. 2014 winners include:

- · Kourtney Shewmaker, PharmD, BCPS
- Brett Vickey, PharmD, BCPS
- Sarah Vickey, PharmD, BCACP
- Joan Haltom, PharmD
- Monica Wesley, PharmD
- · Lois Sebastian, PharmD, BCPS

2017 First Preceptors of the Year

- Monica Wesley, PharmD
 Preceptor: Internal Medicine
- Mary B. Covell, PharmD, MPH, BCPS Preceptor: Critical Care

Milestone Anniversaries: Years of Service

5 Year

- Tara Neitzel, PharmD, BCPS
- Sarah Vickey, PharmD, BCACP

10 Year

- · Ashley Cambron, PharmD, BCPS
- · Andrew Losch, PharmD
- Brett Vickey, PharmD, BCPS

15 Year

· Tina Cooley, RPh

25 Year

Angie Hatter, PharmD, BCPS

Service: A commitment to excellence in everything we do

Commitment to increasing quality skills fair; participation in committees, any growth in pharmacy services?

For Fiscal Year 2017, the pharmacy department has grown and expanded in several areas including:

- Expansion clinical pharmacy services in a decentralized manner to 5 of the 7 patient care areas at EMRMC, specifically adding a decentralized pharmacist to the 5th Floor patient care area. This is in addition to the decentralized pharmacists in the Critical Care Unit, Cardiovascular Unit, Emergency Room and 3rd Floor.
- Medication Reconciliation Service Through re-working our workflow for our medication reconciliation technician, we were able to implement medication reconciliation service in our Emergency Room, Monday through Friday from 7 a.m. through 7 p.m.
- Naloxone education and dispensing program
- APhA The Pharmacist & Patient-Centered Diabetes
 Care Five pharmacists completed this program to
 show competency in diabetes management. This was
 in anticipation of the new diabetes population health
 program provided by EMH as well as the diabetes
 management collaborative care agreement.
- ENT clinic development of protocols for allergen extract testing and immunotherapy
- Factory-based immunizations at Timberland, impacting at least 25 employees
 - For FY2017 186 total flu vaccines were administered.
- TB testing: Outpatient pharmacists completed training in August 2016 and began providing TB skin tests for Associates in September 2016.
- Demonstrate a commitment to improve our delivery of pharmacy services through Skills Fair Pharmacy Seminar Series





Pharmacists who completed certification in APhA The Pharmacist & Patient-Centered Diabetes Care

Trust: Adhering to principles that foster honesty, integrity, confidence and safety

Our pharmacists are active participants on many organization-wide committees. Pharmacists take the lead on the development of evidence-based protocol and process development on these interdisciplinary teams. The highest level of attention is placed to developing these protocols, and the pharmacy department has garnered trust from those that we work with. During the FY 2017, pharmacists worked on accreditation teams such as the CPv5 American College of Cardiology accreditation team and Stroke Core team. Specially, pharmacists played an integral part in the CPv5 team development of new ACS, STEMI/post catheterization order sets as well as the

revision of the Stroke protocols. Pharmacists also serve as integral team members on the Sepsis Core Measure team helping to improve our response to sepsis and septic shock. Other evidence based protocols developed or reviewed by our pharmacists this year are outlined in the Clinical Pharmacy Section.

Pharmacy takes the lead on the medication management and safety team, MERCEDES. Regarding medication safety we closely monitor safety data trends and initiate safety initiatives when appropriate by closely monitoring the latest publications and recommendations from the Institute for Safe Medication Practices.

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Ashley Cambron, PharmD, BCPS Inpatient Pharmacy Manager

The Inpatient Pharmacy is operational 24 hours a day, 7 days a week, offering services to patients of all ages including neonatal, pediatric, adolescent, adult and geriatric populations. We provide inpatients and outpatients with oral, topical, otic, ophthalmic and parenteral medications as ordered by authorized practitioners.

Medications are dispensed by pharmacy in unit dose, ready to use packaging. Omnicell automated dispensing cabinets are used to provide >95% of the ordered medications in patient care areas. Crash carts and emergency boxes are stocked and restocked by pharmacy Associates.

Medications controlled by the Drug Enforcement Agency are ordered from wholesaler using an electronic CSOS program and secured through a perpetual Controlled Substance Management system in central pharmacy. Controlled substances are distributed to patient care floors via Omnicell or Controlled Substance Administration Records. Pharmacy Associates routinely audit controlled substance transactions to detect and reduce risk of diversion. Controlled substances that expire are returned to the wholesaler through a verified reverse distribution company.

Pharmacy also provides sterile compounding services for low and medium risk parenteral products from a <USP797> fully compliant clean room. Products compounded include both small and large volume parenterals, including Total Parenteral Nutrition, Chemotherapy, Epidurals and PCAs.

Pharmacy dispenses and wastes hazardous medications in compliance with the EPA and <USP 800> standards.

Pharmacy provides stock medications for all ancillary departments, system clinics, and patient care units. Medication storage areas of hospital patient care areas are checked monthly by pharmacy Associates for expiration dates, proper storage and security conditions, with the same service provided on a quarterly basis to EMH system clinics. Expired medications are returned to the wholesaler through a certified reverse distribution company.

Pharmacists verify physician medication order entries or enter telephone/written medication orders for patients via our computerized pharmacy system. Pharmacists screen for drug-drug interactions, drug-nutrient interactions, therapeutic duplication, potential medication errors, potential adverse drug reactions, incomplete orders,

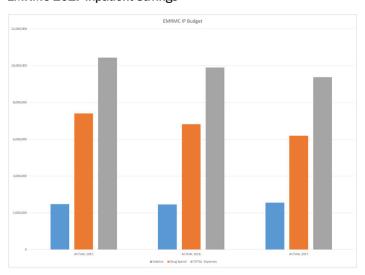


inappropriate drug selection or dose, ambiguous orders, illegible orders, contraindications to medications prescribed or for noted allergies to medications prescribed during the order-entry process.

Pharmacists and pharmacy technicians participate in the medication reconciliation process during admission, transfer, or discharge. Pharmacists review discharge medication lists once physicians have provided discharge medication orders.

Pharmacists and technicians serve as preceptors for PGY1 Residents, Doctor of Pharmacy and Pharmacy Technician students completing clinical rotations.

EMRMC 2017 Inpatient Savings



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EMRMC Clinical Pharmacy Services

Mary B. Covell, PharmD, MPH, BCPS

Pharmacy Clinical Coordinator

EMRMC pharmacy department provides inpatient clinical pharmacy services 7 days a week. Monday through Friday, this includes floor-based pharmacists serving patients in the ICU, Telemetery, 3rd Floor, 5th Floor, and Emergency Department. The de-centralized pharmacist process of care is modeled from the American College of Clinical Pharmacy Standards of Practice for Clinical Pharmacist¹.

Productivity is tracked using clinical interventions documentation within PCS of MediTech. Daily documentation includes documentation on pneumonia, acute myocardial infarction, and heart failure core measures, anticoagulation monitoring, pharmacokinetic monitoring, culture and sensitivity monitoring in addition to clinical follow-ups and monitoring on a patient specific or unit-specific basis.

For FY 2017, Clinical Pharmacists made 38,565 non-CORE measure interventions.

Clinical Roundtable is shared governance that serves to organize, track, and support the inception and completion of clinical initiatives in the EMRMC Department of Pharmacy. The Roundtable is held on a monthly basis. At each meeting, status updates are provided, completion of projects is tracked, and new initiatives are introduced. Clinical Roundtable activities are tracked on a colorcoded spreadsheet that is accessible and editable by all pharmacists in the department. It provides target "Go Live" dates, required committee approval. This method of managing clinical tasks has boosted productivity and increased pharmacist participation. This dual benefit has enhanced our provision of quality work on clinical protocols and initiatives as well as increased job satisfaction due to added sense of contribution to the department and institution as a whole. It has fostered collaboration and working groups among our pharmacist as well as across disciplines. The Roundtable is led by clinical staff pharmacist on a rotating basis, 6 months at a time. This allows for the opportunity to lead to be shared and to rotate among the group.

Pharmacy Seminar is a weekly, hour-long seminar that provides opportunity for staff pharmacist, students, and

Daily Clinical Pharmacy Services

- · Daily patient assessment
- Medication therapy evaluation
- Development and implementation of plans to address drug-related problems
- · Interdisciplinary rounding
- Follow-up evaluation and medication monitoring
- · Pharmacokinetic monitoring
- Pharmacotherapy consultation including antibiotic recommendation and dosing
- · Anticoagulation management
- Medication reconciliation
- Order verification
- · Discharge planning and counseling

Clinical Roundtable Completed Initiatives FY 2017

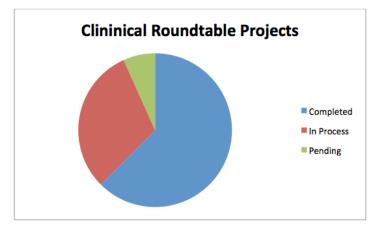
- Acute coronary syndrome protocol
- STEMI/Post cardiac catheterization protocol
- Stroke protocol revisions
- Basal-Bolus Insulin Protocol
- Desferal protocol for iron overload in chronic transfusion patients
- Status epilepticus protocol
- Diabetic Ketoacidosis protocol
- Pulmonary Embolism pathway and protocol
- Pre-operative antibiotic protocols
- Inhaled epoprostenol in mechanically ventilated patients protocol
- Post-exposure prophylaxis protocol



¹American College of Clinical Pharmacy. Standards of Practice for Clinical Pharmacists. Pharmacotherapy 2014;34(8):794–797.

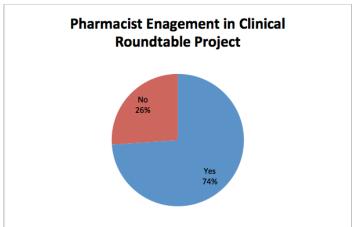
EMRMC: INPATIENT PHARMACY OPERATIONS)

residents to present on current topics and projects. This includes case presentations, journal clubs, guideline updates, monographs, MUEs, and other applicable topics. On a bi-monthly basis "Pharmacy Skills Fair" is presented by a pharmacist or resident. This method for professional development includes a quiz to assess comprehension of the provided topic, remediation provided as necessary. Presenters select a topic based on personal interest and timeliness based on publication of new information and/or clinical scenarios or initiatives encountered at EMRMC. This ensures that pharmacists are exposed to a broad range of therapeutic knowledge domains.



Goals for FY18

- Meet goal of medication discharge counseling for heart failure patients (75% of discharges)
- Provide CME credit for pharmacy seminar
- Expand "pharmacy seminar" to include a critical thinking series



Antimicrobial Stewardship Program (ASP)

Angie Hatter, PharmD, BCPS

Antimicrobial Stewardship Coordinator

A central component of the ASP is the antimicrobial management team (AMT). This team was originally formed in 2003 and currently consists of an ID trained physician, an ID trained pharmacist, microbiology staff, infection prevention staff, and clinical pharmacists. The AMT meets once weekly with an ID physician either in person or via the telehealth network. There are 13 specified antimicrobial agents that are designated as "restricted". The AMT process is to review cases by prospective audit and feedback. In 2016, initiatives were begun to align the AMT process with the CDC Core Elements of ASP. The initiatives that have been successfully implemented to date are:

- Leadership Support Statement
- CPOE requirement to include the clinical indication on all antimicrobial orders

- Pharmacists' documentation of 48 hour timeouts for antimicrobial orders
- Use of data-mining software to capture DOT/DDD trends
- Use of rapid diagnostic technology for early targeted therapy for blood and CSF cultures
- Provide patient education on general antibiotic use in admission packets
- Distribute an "Empiric Antimicrobial Guidelines" booklet to providers throughout the system
- Pharmacist encourage the primary team to utilize biomarkers, such as procalcitonin and urinary legionella antigen to help determine necessary treatment duration
- Track pharmacist documentation of interventions to improve antimicrobial use

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Results for FY 2016-2017

Indicator	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	FY 2017
	FY 2017	FY 2017	FY 2017	FY 2017	Totals
Number Reviewed	83	130	109	135	457
Number of	40	55	57	61	213
Recommendations					
Accepted	36/40	49/55	51/57	56/61	192/213
Recommendations	(90%)	(89%)	(89%)	(92%)	(90%)
Acknowledged	40/40	55/55	57/57	61/61	213/213
Recommendation	(100%)	(100%)	(100%)	(100%)	(100%)
Sputum C/S with Dx	19/41	31/68	22/42	20/42	92/194
of PNA	(46%)	(46%)	(52%)	(47%)	(47%)

Antimicrobial Stewardship Program (ASP) by the numbers

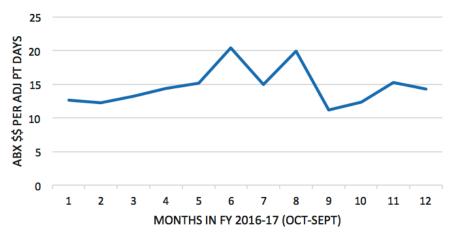


Pharmacists ASP Interventions FY 2016-17



- Antimicrobial Management Consult Vancomycin (dose and monitor)
- C&S Therapy Recommendation
- IV to PO Conversion
- Aminoglycoside (dose and monitor)
 Renal dosing recommendations
- Dose calculation or adjustment
- Clarify allergic reaction or response

ABX cost per adjusted patient days EMRMC



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EMH – Certified Pharmacy Technicians

Providing support services to our patients and coworkers is at the heart of our Pharmacy department mission. And we could not achieve all that we do, day in and day out, without a talented group of Certified Pharmacy Technicians in all of our Ephraim McDowell Pharmacy cost centers. 100% of our pharmacy technicians at Ephraim McDowell are certified through the national Pharmacy Technician Certification Board. We encourage the advanced scope of practice for Certified Pharmacy Technicians at Ephraim and promote continued learning for our technicians through the Pharmacy Technician Advanced Practice Level program. This EMH program offers our certified technicians several advanced practice modules which they can complete at their own

pace. As they complete the advanced practice modules they advance to Level III or Level IV practice positions.

Current advanced practice modules offered include:

- · chemotherapy admixture
- · medication reconciliation
- inventory management

Our inpatient certified pharmacy technicians are cross trained to provide distributive functions and aseptic compounding. They manage automated dispensing cabinet restocking, new order fills and deliveries, controlled medication distribution and returns and aseptic compounding. Our certified pharmacy technicians also provide unit dose packaging and barcode labeling, participate in PI data collection, manage hazardous drug waste and inventory functions. They provide unit inspections of medication storage areas throughout the hospitals and clinics. The technicians are very involved in meeting the needs of our inpatients and from outpatient departments like the Emergency Department, Same Day Surgery, Recovery 3 infusion center, EMRMC Pain Clinic and the offsite EMH clinics. The EMRMC pharmacy technicians also serve as the primary distribution system for our drugs to patients in the Johnson Patient Care Tower where no tube system exists. It is easy for our EMRMC



techs to get more than 10,000 steps a day! Many of our technicians are cross trained to multiple pharmacy cost centers including Fort Logan, Outpatient Pharmacy, Cancer Support Infusion Clinic and EMRMC.

Outpatient certified technicians provide prescription order entry, new patient input, prior authorization and refill requests, dispensing and clerical transactions. They provide great customer care by looking for coupons or opportunities to save our patients and Associates money on their prescriptions. The outpatient certified technicians also assist with inventory and maintaining retail over the counter selection to meet the demands of our customer base. Outpatient certified technicians may provide Concierge deliveries to our inpatient rooms prior to discharge or assist with medication reconciliation service.

EMH certified technicians are offered the opportunity to participate in Clinical Achievement Pathway (CAP) for technicians. This program helps our certified technicians develop new skills and be involved in aspects of practice and as leaders in our organization and community that exceeds the demands of their specific job description. The CAP program has been instrumental in keeping our technicians challenged, engaged and offers them an avenue to be rewarded for their advanced service and contributions to the department and organization. In 2017, 36% of our certified technicians achieved CAP.

EMRMC: INPATIENT PHARMACY OPERATIONS)

FLH: Critical Access Hospital Services

Jaime Kenney, PharmD. BCPS

The Ephraim McDowell Fort Logan Hospital Inpatient Pharmacy offers critical access services to patients of all ages including neonatal, pediatric, adolescent, adult and geriatric populations. The Pharmacy Department is staffed by two full-time Associates (Pharmacy Manager and a Certified Pharmacy Technician), two part-time Associates (Staff Pharmacist and a Certified Pharmacy Technician), and one FLEX Pharmacy Intern. Our hours of operation are Monday through Friday 7 a.m. to 5 p.m. and Saturdays from 7 a.m. to 1 p.m. The EMRMC Inpatient Pharmacy provides care for EMFLH patients remotely when our pharmacy is closed.

Inpatient Pharmacy services at FLH include:

Order verification of medications ordered by authorized practitioners

Pharmacists screen for drug-drug interactions, drug-nutrient interactions, therapeutic duplications, potential medication errors, potential adverse drug reactions, incomplete orders, inappropriate drug selection or dose, ambiguous orders, contraindications, and noted allergies to prescribed medications

 Omnicell automated dispensing cabinets for unit dose distribution in patient care areas

Medications designated as controlled by the Drug Enforcement Agency are distributed via Omnicell cabinets to enhance security and to detect and reduce risk of diversion.

- Maintain crash carts
- Complete patient billing, process drug recall notices, and dispose of expired medications
- Monthly check of non-pharmacy medication storage areas of the hospital for appropriate dating, storage, and security
- Preparation and distribution of parenteral medication products utilizing our <USP797> compliant Compounding Aseptic Isolator (CAI)



- Medication Reconciliation on admission, transfer, and discharge
- Daily Patient Profile Review includes assessment of renal function, culture and sensitivity results with antimicrobial stewardship emphasis, pharmacokinetic dosing

Other Inpatient Services:

In FY 2017, FLH Swing Bed services have expanded. Our pharmacists complete timely drug regimen reviews to identify potential or real drug therapy problems, improve disease state management, and to ensure that there is a continuity of care during the facility transfer process.

EMFLH is designated as a Level IV Trauma Center and Pharmacists play a key role in medication dosing and distribution while caring for patients with traumatic injuries. Pharmacists respond to codes and are trained in BLS, ACLS, and PALS.

The EMFLH Pharmacy Department is designated as an IPPE program site through the Office of Experiential Education at the University of Kentucky.

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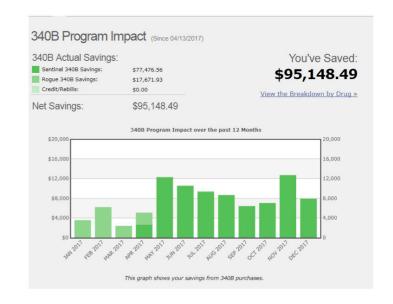
Outpatient Pharmacy services at FLH include:

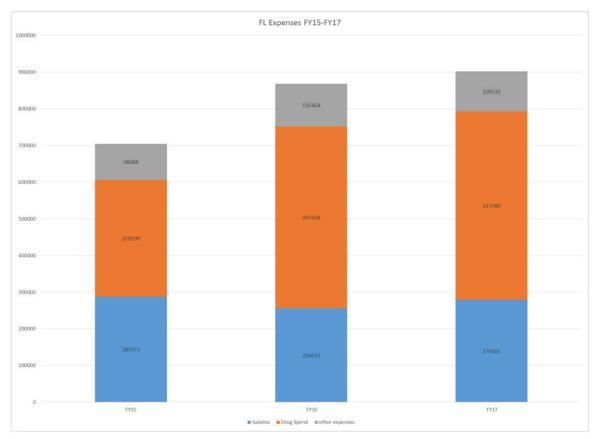
- Onsite patient counseling and payment processing for Associates filling prescriptions at EMRMC outpatient pharmacy
- Medication Therapy Management (MTM)
- Anticoagulation Clinic (ACC) warfarin therapy management

Performance Improvement Efforts:

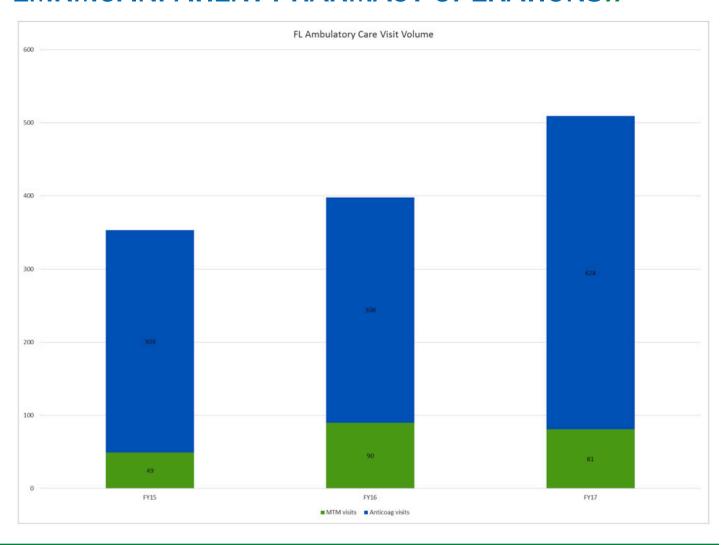
- Medication use evaluations
- Medication Safety through the BENZ Medication Management Committee
- Other committee involvement: Pharmacy Unit Based Council, Pharmacy Clinical Roundtable, Emergency Department/Trauma Committee, Medical Staff Committee, EMH Continual Accreditation Readiness (CAR) Committee, and EMH Safety Committee

Although we are small, we maintain the same standards of excellence in care and customer service that patients will find at all Ephraim McDowell Health facilities.





EMRMC: INPATIENT PHARMACY OPERATIONS)



EMH Medication Management Service

Monthly multidisciplinary Medication Management team meetings are led by pharmacists at each facility. The Mercedes and Benz teams focus on compliance with best practice for medication management, Joint Commission medication management standards and medication safety initiatives. Front line staff and Clinical Managers or Directors from nursing, pharmacy, respiratory therapy, risk management and other disciplines involved in medication management are members.

The Mercedes and Benz Teams trace compliance with Joint Commission medication management standards and report evidence of standards compliance data to the system-wide CAR (continuous accreditation readiness) Committee monthly. The teams develop educational

newsletters to educate front line staff on medication-related practice, policies, safety initiatives and Joint Commission standards.

Medication Safety is a key focus for EMH Pharmacy. EMH utilizes barcode scanning and Alaris Guardrails smart pumps to optimize medication safety during the medication administration process. Pharmacists and trained Medication Reconciliation technicians conduct admission and discharge medication reconciliation to promote safe transitions of care. Pharmacists review and update evidence-based protocols and order sets annually. EMH provides Pandora/Omnicell high level screening and reporting to prevent and deter diversion of controlled substances. Pharmacists perform time-outs for designated high-risk medication preparation and dispensing. Risk management provides medication error and adverse event data, which is reviewed and analyzed.

EMRMC: INPATIENT PHARMACY OPERATIONS)

Guardrails® Suite Usage: Third Quarter 2017

Total Suite Usage (%) by Profile			
Profile	Current Period	Previous Period	Difference
CANCER CENTER	97%	98%	-1%
Chemotherapy	88%	97%	-94
Critical Care	91%	91%	0%
Epidural	96%	100%	-4%
Labor Hall	77%	79%	-2%
MED/SURG	82%	82%	0%
Peds > than 10 kg	60%	66%	3%
Peds 10 kg or less	82%	98%	-16%
Training	83%	N/A	N/A
Total Guardrails® Compliance	87%	87%	0%

Data Source: Alaris® System Report; Report Generate Date: 10/08/17

Guardrails® Suite Usage: Third Quarter 2017

Profile	Current Period	Previous Period	Difference
CANCER CENTER	97%	98%	-1%
Chemotherapy	88%	97%	-9%
Critical Care	91%	91%	0%
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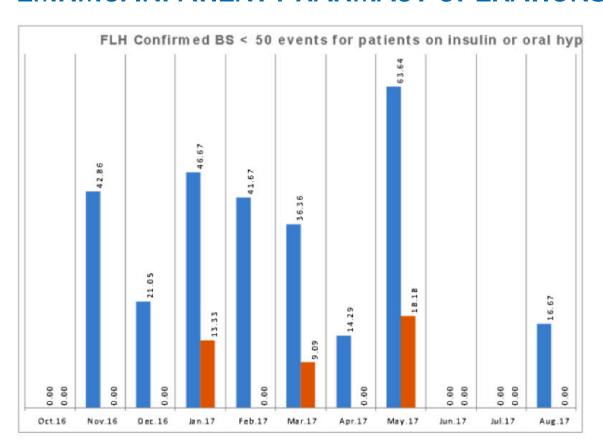
Data Source: Alaris® System Report; Report Generate Date: 10/06/17 © 2017 CareFusion Corporation or one of its subsidaries. All rights rese

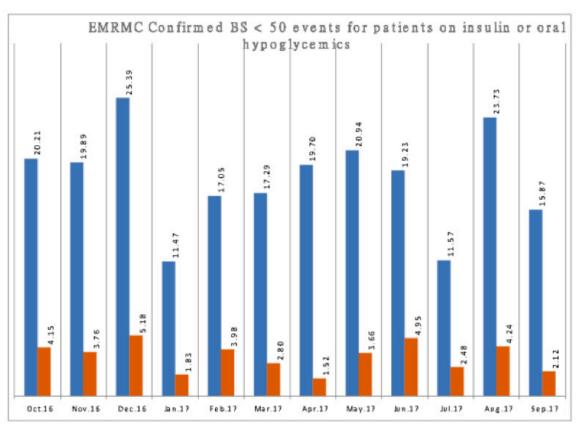
Fort Logan and EMRMC had successful Joint Commission surveys in 2017 with no high risk **Medication Management findings!**

Medication Safety Team Initiatives 2017:

- Leap Frog Barcode Scanning survey
- Look Alike-Sound Alike Staff Survey
- Hazardous Drug Staff Survey
- Paralytic Storage Alerts
- ADE Hypoglycemia event tracking
- Text message policy and practice revisions
- Anonymous reporting of medication safety concerns via intranet
- Medication Safety huddles monthly
- High Dose Insulin (U-500) education
- Restore barcode scanning
- · Coded allergies for patient interactions
- Monthly review of Institute of Safe **Medication Practice newsletters**
- · Required admission Review of all home med entries for med reconciliation
- Safety Culture Sentinel Event 57
- Alaris Smartpump updates and COI data
- · Antidotes, known reversal agents/guide
- Pain Score driven analgesic selection
- Home insulin and pain pump use
- Time Critical Med administration
- Labeling of medications
- Multiple med/duplication prevention
- Transition of Care process EMRMC to FL swingbeds

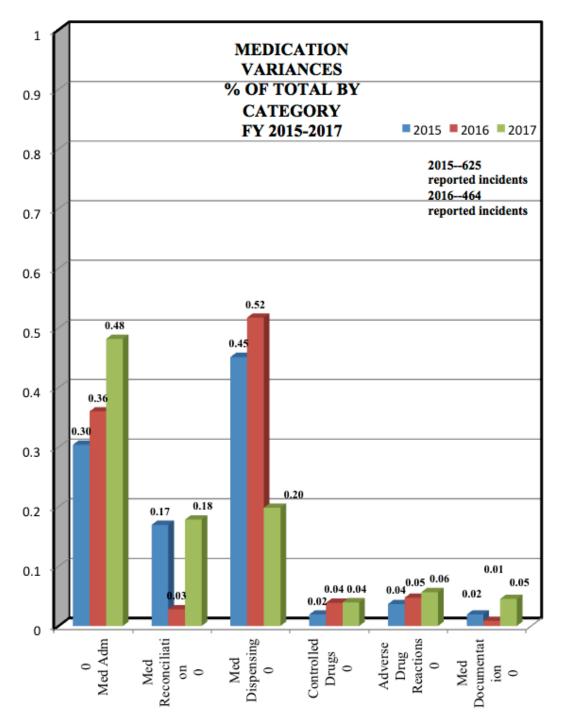
EMRMC: INPATIENT PHARMACY OPERATIONS>>>





EMRMC: INPATIENT PHARMACY OPERATIONS>>

For FY2017, 73% of all inpatient medication administrations were completed with bedside barcode scanning of both medication and medication that is linked to the electronic medication administration record. This was much reduced from prior years due to computer/scanner issues, which were resolved in November 2017.



For FY2017 there were 25 adverse reactions reported and 134 reported line events (22652 IV lines) 0.59%

AMBULATORY PHARMACY SERVICES>>

Outpatient Pharmacy

Location:

Ephraim McDowell Regional Medical Center 217 S. Third Street - 1st floor

Hours of Operation:

Monday thru Thursday 9:30 a.m. to 8 p.m., Friday 7 a.m. to 8 p.m., Saturday 9:30 a.m. to 3 p.m.

The Ephraim McDowell Regional Medical Center Outpatient Pharmacy provides prescription filling services for associates, dependents, and discharge patients, as well as the public. The pharmacy provides ambulatory care services in a variety of areas. The pharmacy offers an automatic refill program and courtesy phone call reminders to pick up prescriptions when they are complete.

A courier service is available to deliver medications to Associates at offsite, out-of-county clinics. Prescriptions for Fort Logan Associates are filled at Ephraim McDowell Outpatient Pharmacy and sent via courier to Fort Logan Pharmacy for pick-up. The pharmacy staffs 6.65 FTE's, which consists of pharmacists and technicians. The pharmacists rotate through staffing the outpatient pharmacy and providing ambulatory care services. Our technicians staff the outpatient pharmacy and one technician is cross-trained to inpatient pharmacy to provide medication reconciliation services.

FY2016/17	
Prescription Volume	57,511
Charity Prescriptions	664

Ephraim McDowell Health requires Associates using EMH benefits to fill maintenance medications at Ephraim McDowell Regional Medical Center's Outpatient Pharmacy. For fiscal year 16/17, 95.5% of prescriptions for our Associates and dependents on the Medimpact plan were filled at Ephraim McDowell Outpatient Pharmacy. This helps the organization save on costs to provide medications to covered Associates and dependents. EMH benefits provide a 90-day fill option for prescriptions. With this option, patients pay two copays for three months of medication.

Medimpact Stats FY 2016/17	Quarter 1	Quarter 2	Quarter 3
Total Rx Count	7845	7020	7034
Total Cost	\$468,157	\$407,018	\$403,902
Total Plan Paid	\$335,621	\$290,049	\$299,479
Plan Paid PMPM	\$46.43	\$43.60	\$42.39
Generic Rx%	83.3%	82.9%	82.5%
Specialty Plan pd PMPM	\$4.45	\$2.66	\$4.43

AMBULATORY PHARMACY SERVICES>>



Transition of Care programs:

Concierge service:

Since 2012, the outpatient pharmacy has provided a concierge service for patients wishing to fill their prescriptions before going home. Once prescriptions are filled, outpatient pharmacists deliver the prescriptions to the patient's bedside where they counsel and answer any questions or concerns patients may have regarding their medications. When using this program, the outpatient pharmacy can help the patient with high copays or prior authorization problems. These issues can be resolved before the patient leaves the hospital. The pharmacy works to find manufacturer coupons to assist with high copays when patients are eligible.

Delta Program:

In 2013, the outpatient pharmacy became a part of a multidisciplinary team to help coach patients at high risk for readmission. Patients with congestive heart failure (CHF), community acquired pneumonia (CAP), chronic obstructive pulmonary disease (COPD), and acute myocardial infarction (AMI) are offered to be enrolled in a program to help manage their disease state. Outpatient pharmacists make post discharge calls at specified intervals. At this time, the patient's symptoms are assessed as well as medication adherence or problems/concerns relating to medications.

P&T approved protocols in fiscal year 16/17:

- Diabetes management collaborative care agreement
- Therapeutic substitution of inhalers
- Immunizations
- Naloxone

Anticoagulation Clinic

At Ephraim McDowell Health Anticoagulation Clinic patients are referred by providers and cared for by pharmacist under collaborative practice agreements. Patients on warfarin are monitored via point of care fingerstick or venous draw. Patients are referred by providers and cared for by pharmacists using collaborative care agreements. Patients are asked a series of questions, warfarin dosage adjustments made per P&T approved protocol, and follow-up appointments are scheduled.

Population Served

FY2016/17	
Number of visits	1420
Number of patients	117
Number of in range INR's	937
	65.98% of visits in range

Vaccinations Given

FY2016/17	
Influenza	186
Zostavax	34
Prevnar 13	23
Pneumovax 23	21
Adacel	6

To help kick off flu season, the outpatient pharmacy offers two drive-thru flu clinics. Associates, dependents, and the public can drive through, roll up their sleeves, and receive a flu shot while sitting in their car.

Medication Therapy Management (MTM)

EMH Associates and dependents on EMH health insurance are encouraged to participate in our MTM program. Patients meet with an outpatient pharmacist to review medications for adverse drug effects, cost savings, adherence, or to discuss problems/concerns with their medication. During fiscal year 16/17, 895 appointments were completed.

Online MTM (Humana Outcomes) CMR completion

Outpatient pharmacists are enrolled in online MTM programs through Mirixa and Humana. Patients are assigned to the pharmacy and outpatient pharmacists make calls to complete the MTM appointment. They also complete TIPS or other assigned tasks from the program. This may include compliance counseling, new medication counseling, assessing for missing therapies, or contacting the provider to change to a therapeutic alternative.

FY2016/17	
Total CMR completed	41
Successful CMR completion	27

The outpatient pharmacy is assessed by the Medicare Star Ratings system. Each year, specific star measures are targeted for the PI dashboard. For fiscal year 16/17, the outpatient pharmacy followed adherence to blood pressure and cholesterol medications. Outpatient pharmacy staff helped to counsel patients on the importance of adherence and enrolled them in our automatic refill program.

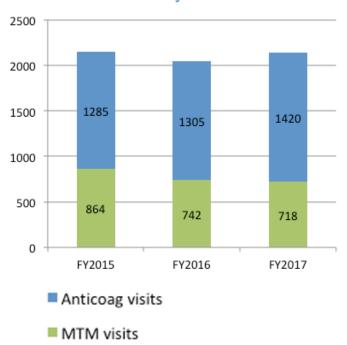
Star Measures Report monitored for Performance Improvement dashboard

FY2016/17 (as of August	2016)	
Adherence to BP meds	38/43	85%
Adherence to Chol Meds	24/32	75%

The pharmacists in the outpatient pharmacy are certified to dispense Narcan® (naloxone). We were the first pharmacy in Boyle County to dispense Narcan® (naloxone)

under a pharmacist driven dispensing protocol. Sixteen doses of Narcan® (naloxone) were dispensed in fiscal year 16/17. The pharmacist also educated EMH primary care offices on how and when to use Narcan® and provided clinics handouts to distribute to patients detailing how Narcan® can be obtained. We received a \$500 grant from the Heroin Task Force to supply free doses for those who have no insurance or otherwise could not afford Narcan®.

EMRMC Ambulatory Care Visits



Ambulatory Care appintments trending over the last three fiscal years



AMBULATORY PHARMACY SERVICES>>



HOPE Clinic and Pharmacy:

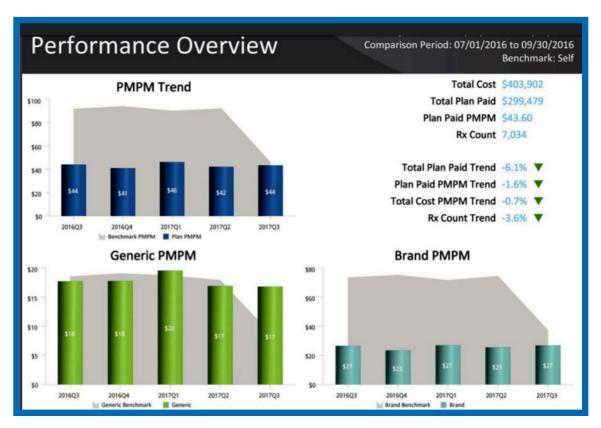
Provide medications at no cost to patients of our indemnity population clinic. 395 prescriptions provided to this population during fiscal year 2016/17.

340b contract pharmacy:

Contracted with SunRx from October 2016 to June 2017 and Sentry from February 2017 to September 2017 to provide 340b program to contract pharmacies. Contracted with Kroger and Wal-Mart in Boyle and Mercer counties and CVS and Medicine Shoppe in Boyle County.

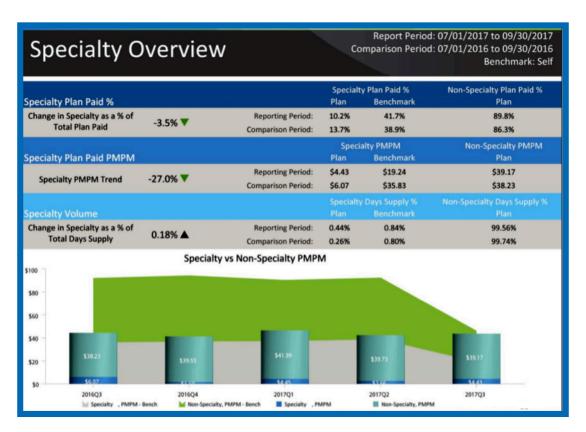


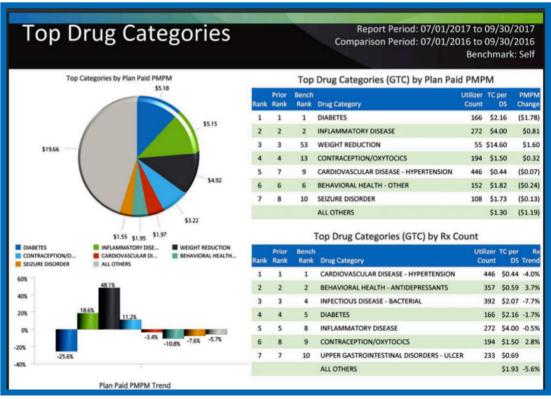
AMBULATORY PHARMACY SERVICES>>>





AMBULATORY PHARMACY SERVICES>>





AMBULATORY PHARMACY SERVICES>>

Ephraim McDowell Commonwealth Cancer Center

Michelle Fraley, PharmD, BCPS

Pharmacist-In-Charge, Ephraim McDowell Commonweath Cancer Center

Chemotherapy Infusion Services

- Sterile compounding
- Maintaining USP 797/800 compliance
- Physician order review and entry
- Implementation of new continuous infusion device
- Facilitate chemotherapy services for patients requiring inpatient admission
- Provide Nursing education for new and review of old processes

Evidence-based Chemotherapy Treatment Review

 Clinical Pharmacist review of all intravenous chemotherapy treatment plans

- Development and implementation of more standardized chemotherapy order forms
- Implementation of HOPA/ASCO standardized rounding protocol to minimize waste
- Implementation of NCCN templates as standard protocols

Oral Chemotherapy Adherence

- Development of patient tools to improve medication adherence
- · Interdisciplinary patient education
- Incorporation of pharmacy follow-up call

Investigation Services

- 3 active medication intervention studies
- · Handle receipt of investigation medications
- Maintain storage and disposal of medications





SUPPORT SERVICES>>

Pharmacy informatics

Amanda S. Burton, PharmD, BCPS

Information Technology Pharmacist

The Information Systems Pharmacist provides automation and database management support for Ephraim McDowell Health, including Ephraim McDowell Regional Medical Center, Ephraim McDowell Fort Logan Hospital, Ephraim McDowell Commonwealth Cancer Center, and Ephraim McDowell Clinics using LSS (19 clinic locations).

The IS pharmacist works with Pharmacy Services and Information Systems to monitor daily operation of pharmacy systems. The pharmacist maintains medication and order set dictionaries to verify proper ordering, charging, and automated clinical decision making. Additionally, the build, validation, and implementation of new pharmacy technologies are managed by the IS pharmacist.

Automation Supported

- Omnicell® automated dispensing cabinets
- Alaris® smart pumps/Guardrails® software
- Sentry Data Systems[™] 340B split billing software
- Meditech bedside medication verification
- Midwest Medical Equipment Auto-Print[™] medication packager/Pak-EDGE[™] software
- · WaspLabeler barcode software
- Medkeeper® IV Workflow Management

Dictionaries Supported

- Outpatient medication dictionary (Meditech RXM)
 - Monthly formulary maintenance
- Inpatient medication dictionary (Meditech PHA)
 - Addition/removal of medications
 - Submission of HCPCS information for new Chargemaster entries
 - Monthly formulary maintenance
 - Provider order string maintenance
- Immunizations
 - Inpatient ordering
 - Outpatient clinic procedures

- Integrated reporting to Kentucky Health Information Exchange (KHIE)
- · Meditech order sets
 - Provider medications
 - Pharmacist
- Guardrails® medication database
- Omnicell® databases
 - Scheduled reports and restock
 - Items, Kits, and Users maintenance

Additional Responsibilities

- Monthly Omnicell® and Alaris® pump education for nurse orientees
- Pharmacy representative for Meaningful Use Committee
- Daily KASPER reporting

Ephraim McDowell Clinics & MedSource

EMRMC Pharmacy provided services to 19 Ephraim McDowell Clinics and to Ephraim McDowell MedSource this year.

Pharmacy Associates provide quarterly clinic inspections to our clinics and MedSource to assure that medications are managed according to state and federal guidelines, Joint Commission standards and Kentucky Board of Pharmacy medical gas licensure. This includes proper storage and control of sample medications and stock medications.

Ephraim McDowell Clinics order medications from EMRMC Pharmacy for clinic stock. The medications are provided to each clinic via hospital courier on a daily basis.

Vaccines are also ordered and centrally distributed to clinics from EMRMC Pharmacy.

EMRMC IT Pharmacists provide LSS support for maintenance of the Clinic Meditech chargemaster and order strings that promote electronic prescribing and charting.



EDUCATION & TRAINING)

Post Graduate Year One Pharmacy Residency

Program Specifics: Residents: 2 • Preceptors: 15 Learning Experiences offered: 10 required, 11 elective

Happenings:

- Research posters were accepted and presented at ASHP Midyear Clinical Meeting in Las Vegas, NV. Research presentations were accepted and presented at Great Lakes Pharmacy Residency Conference in West Lafayette, IN.
 - Impacting Antimicrobial Stewardship in a Community Hospital through the use of BioFire FilmArray®
 Technology
 - Chronic Obstructive Pulmonary Disease (COPD)
 discharge prescribing prior to and post implementation
 of a pharmacist-driven, evidence-based protocol in a
 rural community hospital setting



- In June 2017, Nicholas Wilson, PharmD and Chelsea Stamper, PharmD successfully completed our PGY1 pharmacy residency program.
 - Nick accepted a position at Appalachian Regional Healthcare in Pikeville, where he joins his wife who is a medical resident at Pikeville Medical Center.
 - Chelsea accepted a clinical staff pharmacist position at EMH, where she will be working in both outpatient and inpatient pharmacy.





The MATCH for 2017-18:

- 29 Applications submitted to Phorcas, highest number of applicants in the history of our program
- 15 candidates invited to interview
- Successfully matched two candidates in Phase I of the Match
- In July 2017, Stephen Crutcher, PharmD and Porter Lee Ramsey V, PharmD, both recent graduates from the University of Kentucky College of Pharmacy, joined our team to complete our residency program.
- In January 2017, surveyors from ASHP Commission on Credentialing were on-site for the accreditation survey. We are excited to announce that our program was granted successful accreditation for three years (2020).

Student Pharmacists:

Our pharmacy team is dedicated to developing the next generation of pharmacists.

Preceptors: 12 Rotations offered: 26



Hosted 35 student pharmacists from six different colleges:

- University of Kentucky College of Pharmacy
- Sullivan College of Pharmacy
- Belmont University College of Pharmacy
- Appalachian College of Pharmacy
- Marshall University School of Pharmacy
- · University of Charleston School of Pharmacy

Services our student pharmacists offer:

- Medication Reconciliation
- Discharge Medication Counseling
- Warfarin Counseling
- Patient Case Presentations
- Journal Clubs
- Medication Use Evaluations
- Drug Monograph Development
- Immunizations

LEADERSHIP & SERVICE>>>



Leadership Academy Participant Lauren Riney performing blood glucose testing

EMH Leadership Academy participant this year - Lauren Riney, PharmD

Professional Organization Involvement

- 92% of our pharmacists are members of state or national pharmacy professional organizations.
- Of those who are members of professional organizations, 40% hold a leadership position within that organization. These roles include:
 - KSHP Award and Nominations Committee (2 members)
 - KPhA Public Health Committee
 - 2 Past Presidents of KSHP
 - KPhA Health Information Technology Committee Chair
 - Guest Surveyor for ASHP Residency Accreditation
 - ASHP Legislative Network
 - KY-ACC Scientific Committee Member
 - ACC CV Team KY State Liaison
 - Past President of Bluegrass Pharmacist Association
 - Past Secretary of Kentucky Pharmacist Association

- New Practitioner Committee with KPhA
- KPhA/KPERF Reviewer The Kentucky Pharmacist

Community Involvement

- United Way Leadership Circle (>\$1,000/year)
 - Contributors within the department include: Joan Haltom, Brenda Wilson, Michelle Fraley, Karla Myers, Kourtney Shewmaker
 - Ephraim McDowell Foundation Leadership level contributors (>\$1,000 per year): Joan Haltom, Kourtney Shewmaker
- Community Based Board Involvement
 - Common Good Board Member Amanda Burton
 - Distinguished Young Women Scholarship Program -Lauren Riney
 - Kentucky Agency for Substance Abuse Policy Board -Brenda Wilson
 - Marion County Area Technology Center Health Sciences Board - Ashley Cambron
 - Wilderness Trace Child Development Center Board Member - Mary Covell





Excellence is our only standard

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