

Pharmacy Report

2018-19



Ephraim McDowell
Regional Medical Center

Excellence is our only standard

WELCOME FROM THE DIRECTOR OF PHARMACY»

Joan Haltom, PharmD, FKSHP

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. I am proud to say that we are a stronger system of three acute care facilities now.

Our new CEO, Dan McKay, has brought a new emphasis on growth to our organization this year. Our EMH Pharmacy enterprise has responded to that challenge with:

- New anticoagulation management of warfarin patients using home INR testing
- Expansion of direct patient care services through adoption of four Kentucky Board of Pharmacy approved protocols in our Outpatient/Ambulatory Care Clinic
- Increased immunizations given to our Associates and community through Hepatitis A vaccine clinics and flu vaccination clinics
- Increased patient education for patients on direct-acting oral anticoagulants and warfarin at all three hospitals
- Swing bed admission consults for safe transitions of care and continuation of medications and patient

medication teaching added at critical access hospitals

- More continuing education programs offered to clinical staff (CME, CPE) through our CE Central agreement for live and enduring content programs
- More board-certified pharmacist practitioners on staff including 13 Board certified pharmacotherapy pharmacists (BCPS), 1 Board Certified Ambulatory Care Pharmacist (BCACP), 1 Board Certified Infectious Disease pharmacist (BCIDP), and 2 Board Certified Cardiology Pharmacists (BCCP)
- Expansion of our 340b program to James B. Haggins and over 20 child site EMH clinics and 70 contracted pharmacies across the system
- Increased provision of naloxone education and doses dispensed to our patients in all the counties we serve
- Clinical Roundtable team collaboratively developed or revised over 114 policies, protocols or processes
- Increased research contributions through flipped model research for our PGY1 residents and also EMH practitioner-led research
- 25 EMH pharmacists and technicians earning CAP professional growth levels
- 3 certified pharmacy technicians completing advanced skills level training
- 1 pharmacist completing the EMH Leadership program
- Over 90 applicants for our PGY1 residency program

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
4. The variety of clinical practice settings and populations we get to serve

We are a strong team of collaborative clinical contributors and I am very proud of the work we do here at Ephraim McDowell Health!



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MISSION, VISION & VALUES»

Our Mission

Ephraim McDowell Health is committed to helping people live healthier through quality health care, trusting relationships, and providing value to the people we serve.

Our Vision

Ephraim McDowell Health will be recognized as the first choice for care by delivering quality and advancing health care services in Central Kentucky.

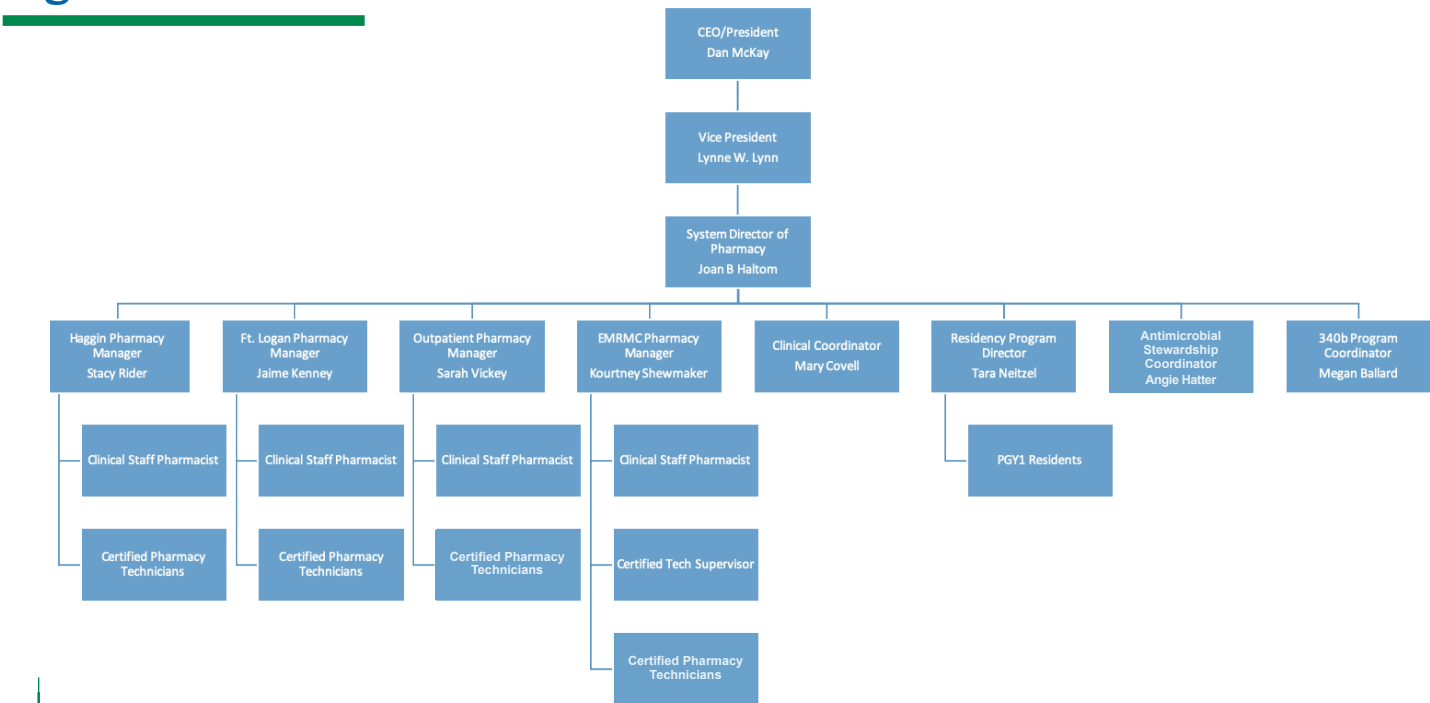
Our Values - F.I.R.S.T.

- 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 comprehensive quality pharmacy services in an innovative, collaborative practice model to support Ephraim McDowell Health’s mission.

Organization Chart



OVERVIEW OF SERVICES»

- Pharmacy services are provided to all inpatients and outpatients through the Ephraim McDowell Regional Medical Center, Ephraim McDowell Commonwealth Cancer Center, and Ephraim McDowell Fort Logan and James B. Haggin 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 Central Pharmacy.

Highlights of new additions to the 2018-2019 performance improvement dashboard:

- EMH: DOAC counseling completed
- JBH: Swing bed discharge counseling
- EMH: Pharmacy to dose vancomycin AUC at goal range (400-600)
- EMRMC: Pt specific sterile products with Medkeeper completion of RPH in real time verification
- CSC: High risk sterile products with Medkeeper completion of RPH real time verification
- EMH: Minimize opioid oversedation/Resp events
- Anticoagulation clinic home INR monitored visits
- 340b Contract pharmacy net revenue growth
- OP Pharmacy care: screening visit volume growth



Decentralized pharmacy services provided by a clinical pharmacist on EMRMC's Cardiovascular Telemetry Unit.

Relationships		
Dashboard Item	Department Goals	Department Results
Overall Associate Job Satisfaction (Excellent Score)	40%	75%
Medication Counseling at Discharge by pharmacist/ interns	27%	34.13%
Operational Effectiveness		
Wholesaler orders on WAC < 20% drug spend	< 20%	13.5%
Contribution margin (meets/ exceeds budget)	71.1%	72.19%
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%	66%
CMR completion or MTM outpatient (3rd party pts)	75%	55%
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%	66%
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 intravenous to oral 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, EMFLH and EMJBHH
- Medication Reconciliation Service
- Providing patient and family medication counseling and education
- Delta Transition of care discharge follow-up program for at-risk readmission populations including AMI, HF and COPD.
- 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 and James B. Haggin swing bed admissions

HIGHLIGHTS BY F.I.R.S.T. VALUES (FY 2019)»

Friendliness, Innovation, Respect, Service, Trust

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
 - World Mission
 - Drive through clinic/flu shots
- Department Comraderies and Celebrations



Pharmacist Brett Vickey participated in a Global Medical Mission in Ecuador.



HIGHLIGHTS BY F.I.R.S.T. VALUES (FY 2019)»

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

This year six pharmacists received board certifications. Angie Hatter is now a Board Certified Infectious Diseases Pharmacist (BCIDP), Brett Vickey and Mary Covell are now Board Certified Cardiology Pharmacists (BCCP) and Heather Ratliff, Nina Whitehouse and Stephen Crutcher are now Board Certified Pharmacotherapy Specialists (BCPS).

Advanced Degrees & Credentials achieved by our pharmacists:

- Board of Pharmacy Specialties (BPS)
 - 13 Board Certified Pharmacotherapy Specialists (BCPS)
 - 1 Board Certified Ambulatory Care Pharmacist (BCACP)
 - 1 Board Certified Infectious Diseases Pharmacist (BCIDP)
 - 2 Board Certified Cardiology Pharmacists (BCCP)
- 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

New Technology in 2018-2019

- Medkeeper
- Theradoc
- New Omnicell medication cabinets with controlled substance auto dispensing
- Summit downtime



2018-19 Non-resident Posters and Presentations

- Continuing Education: 2018 Updates to the American Diabetes Association Guidelines
 - Presenters: Sarah Vickey, PharmD, BCACP & Kourtney Shewmaker PharmD, MBA, BCPS
ACPE/ACCME/AMA PRA Category 1 Credit
Accredited CE Series
Ephraim McDowell Regional Medical Center
April 2018
- Poster Presentation: Utilization of Shared Governance Clinical Roundtable for Clinical Projects and Pharmacist Engagement at a Community Hospital.
 - Shewmaker K, Covell MB, Williams A. Kentucky Society of Health-System Pharmacists (KSHP)
2018 Spring Meeting Poster Session
- Continuing Education: Updates in Cardiology Pharmacotherapy
 - ACPE/ACCME/AMA PRA Category 1 Credit
Accredited CE Series
Presenters: Brett Vickey, PharmD, BCPS, BCCP and Mary Covell, PharmD, MPH, BCPS, BCCP
August 2018
- Kentucky American College of Cardiology Scientific meeting
 - Breakout session “Beyond Statins: What We Need to Know” by Mary Covell, PharmD, MPH, BCPS, BCCP

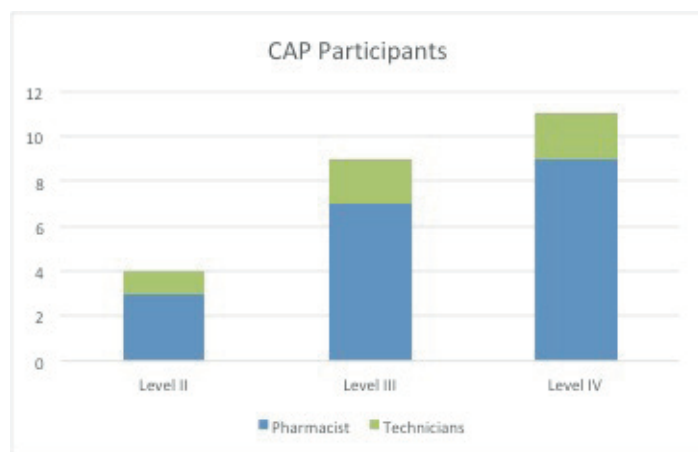


HIGHLIGHTS BY F.I.R.S.T. VALUES (FY 2019)»

(Innovation, continued)

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 2019, 100% of CAP applicants (25 participants) successfully completed the program and achieved their designated Level II, III, or IV.



Pharmacists who achieved Board of Specialty Pharmacy Certifications in 2018. From Left to Right, Heather Ratliff, Angie Hatter, Mary Covell, and Brett Vickey

Other Departmental Advancements

Outpatient Pharmacy has adopted and been trained in Kentucky Board of Pharmacy protocol of strep and flu testing.

Matt Acton, Cp.T. & Brittany Jones, Cp.T., have achieved level 3 on the technician career ladder in 2018.



HIGHLIGHTS BY F.I.R.S.T. VALUES (FY 2019)»

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

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. 2018 winners include:

- Monica Wesley, PharmD
- Nina Whitehouse, PharmD, BCPS
- Lois Sebastian, PharmD
- Katie Martello, PharmD
- Michele Heinz, PharmD
- Patsy Spears, PharmD
- Amanda Burton, PharmD, BCPS
- Stephen Crutcher, PharmD, BCPS

2018 First Preceptors of the Year

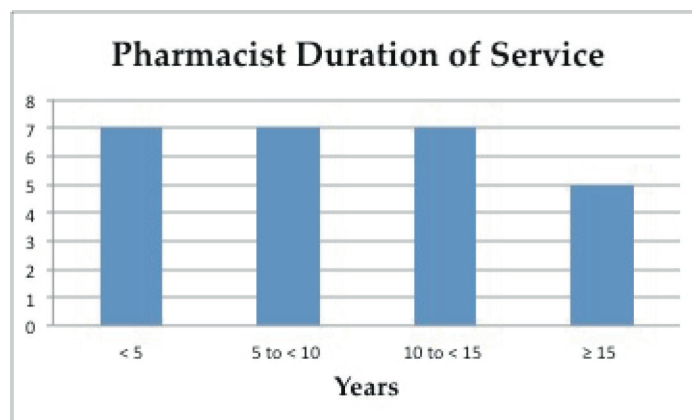
- Amanda Burton, PharmD, BCPS
- Mary Covell, PharmD, MPH, BCPS, BCCP

2019 First Preceptors of the Year

- Heather Ratliff, PharmD, BCPS
- Brett Vickey, PharmD, BCPS, BCCP



Pharmacist Brett Vickey Brett Vickey received the Preceptor of the Year certificate from outgoing PGY1 Resident Megan Ballard.



Service: A commitment to excellence in everything we do

Commitment to increasing quality skills fair; participation in committees

For Fiscal Year 2018, 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 Med/Surg patient care area. This is in addition to the decentralized pharmacists in the Critical Care Unit, Cardiovascular Unit, Emergency Room and 3rd Floor Med/Surg.
- Naloxone education and dispensing program in all service areas
- Factory-based immunizations at Timberland, impacting at least 25 employees
- Hepatitis A vaccination clinics
- Trained in penicillin allergy skin testing
- Emergency Department daily culture review
- Implementation of Medkeeper for verification
- Expanded anticoagulation clinic to James B. Haggin Hospital
- Respiratory Care medication collaborative care agreement with outpatient pharmacy
- Heart failure discharge and DOAC medication counseling
- World Mission to Ecuador



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



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 2018-19, pharmacists worked on accreditation teams such as the CPv5 American College of Cardiology accreditation team and Stroke Core team. Pharmacists played an integral role in revision of stroke protocols and credentialing process to make EMRMC an "Acute Stroke Ready" Hospital per The Joint Commission.

Pharmacists also serve as integral team members on the Heart Failure, P&T, and IRB Committees.

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. 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.



EMRMC: INPATIENT PHARMACY SERVICES»

Kourtney Shewmaker, PharmD, MBA, BCPS
Inpatient Pharmacy Manager

The Inpatient Pharmacy at EMRMC is operational 24 hours a day, seven 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 more than 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: CLINICAL PHARMACY SERVICES»

Mary B. Covell, PharmD, MPH, BCPS, BCCP
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, Telemetry, 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 Pharmacist.¹

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.

In 2018, Theradoc Clinical decision support was added at EMH. This clinical support software has been utilized heavily as part of the culture review process in the Emergency Department. Pharmacists review the report daily to ensure prescribed antibiotic is appropriate for culture result, and make adjustments to outpatient therapy per protocol as needed.

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 color-coded 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 pharmacists as well as across disciplines. The Roundtable is led by clinical staff pharmacists 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 residents to present on current topics and projects. This includes case presentations, journal clubs, guideline updates, monographs, MUEs, and other applicable topics.

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

Examples of Clinical Roundtable Completed Initiatives FY 2018

- Quantum Quality Improvement Study
- Heart Failure Medication Counseling Initiative
- Aminoglycoside dosing in postpartum endometritis
- AMT Stewardship Plan
- IV Push Drug reference for administration and dilution
- IV/IM push promethazine removal from formulary
- Stress Ulcer Deprescribing policy
- Post-exposure prophylaxis protocol
- Drip Book update
- Anticoagulation Counseling and Safety Protocol Development
- Stroke Protocols

Clinical Round Table Productivity FY 2018

Task	Completed
Monograph	8
MUE	19
Protocol Review	53
New Physician Order Sets	3
Clinical Pharmacy Development (Warfarin + PPI De-prescribing)	2
Other Clinical Initiatives (clinical change management, research projects, guideline reviews)	29
Total Completed CR Tasks	114

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



EMRMC: INPATIENT PHARMACY OPERATIONS»

During FY 2018 we were proud to introduce two new offerings for pharmacy seminar. The critical thinking series brings to light unique clinical scenarios that have occurred recently in a pharmacist clinical practice. This situation is submitted for discussion and a round-table, interactive discussion reviews the topic and works through critical thinking skills to approach that situation.

The second offering is a ACCPE, ACME (APA 1 hour), KBP accredited Continuing Education Series. The following presentations were made available to all pharmacy, medical, and nursing staff members within the EMH health system for 1 hour of CE credit each:

1. 2018 ADA Standards of Medical Care Update. Presented by: Kourtney Shewmaker, PharmD, BCPS & Sarah Vickey, BCACP
2. Antimicrobial Stewardship. Presented by: Dr. Mitu Maskey, MBBS & Sarah E. Cotner, PharmD, BCPS - Division of Infectious Disease at UK HealthCare
3. Best Practices for Implementing an Opioid Stewardship Program. Presented by Doug Oyler, PharmD Director of the Office of Opioid Safety & Dr. Kristy Deep, MD, UK Internal Medicine
4. Updates in Cardiology Pharmacotherapy. Presented by: Brett Vickey, PharmD, BCPS, BCCP & Mary Covell, PharmD, BCPS, BCCP
5. Antiplatelet Therapy: What's New. Presented By: Dr. Hussam Hamdalla, MD FACC FSCAI, Ephraim McDowell Heart & Vascular Institute
6. Calcium Channel Blockade: Insulin to the Rescue by Ashley N. Webb, MS, PharmD, D.ABAT, Clinical Toxicology Director, Kentucky Poison Control Center
7. Nip it in the Blood: Treatment of Bacteremia by James G.O., PharmD, PGY2 Infectious Diseases Pharmacy Resident UK Healthcare
8. Healthcare Associated Pneumonia: HAP/VAP by Dr. Mitu Maskey, MBBS, Department of Infectious Diseases UK Healthcare
9. Xa - Reversal and FQ Adverse Reactions by Katie Martello, PharmD and Megan Ballard, PharmD, MBA
10. Drug Induced Renal Syndromes by Ayman A. Geneidy, MD, Central Kentucky Kidney Center

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



EMRMC: INPATIENT PHARMACY OPERATIONS»

Antimicrobial Management Team Data

Indicator	1 st Quarter FY 2018-19	2 nd Quarter FY 2018-19	3 rd Quarter FY 2018-19	4 th Quarter FY 2018-19	FY 2018-19 Totals
Number Reviewed	85	95	96	83	359
Number of Recommendations	29	37	39	42	147
Accepted Recommendation	25/29 86%	33/37 89%	36/39 92%	41/42 98%	135/147 92%
Acknowledged Recommendation	28/29 97%	36/37 97%	38/39 97%	42/42 100%	144/147 98%
Sputum C/S with Dx of Pneumonia	14/31 45%	17/43 40%	14/27 51%	17/33 52%	62/134 46%

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 and James B. Haggin, 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 Status) 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 2018-19, 39% of our certified technicians achieved CAP or new level in CPT ladder.



EPHRAIM MCDOWELL HEALTH: CRITICAL ACCESS HOSPITAL SERVICES >>

Fort Logan Hospital

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), and two part-time Associates (Staff Pharmacist and a Certified Pharmacy Technician). Our hours of operation are Monday through Friday 7 a.m. to 5 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:

Our pharmacists complete timely drug regimen reviews for our swing bed patients 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.



EPHRAIM MCDOWELL HEALTH: CRITICAL ACCESS HOSPITAL SERVICES »

Outpatient Pharmacy Services at FLH Include:

- Onsite patient counseling and payment processing for Associates filling prescriptions at EMRMC outpatient pharmacy
- 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.

James B. Haggin Hospital



Pharmacy offers a wide scope of clinical services. Pharmacists calculate kinetic dosing of aminoglycosides and vancomycin when consulted. This process entails calculating the appropriate dose based on a series of factors such as weight and renal function

and adjusting dosing based on drug levels. Renal function on all patients is reviewed daily and dose adjustments are made per protocol for certain antibiotics. Recommendations are made to the provider regarding the adjustment of doses for other medications. All patients on antibiotics are reviewed daily for appropriateness of therapy, and doses are verified based on indication. Providers are contacted to de-escalate antibiotic therapy when appropriate based on culture results. Pharmacists may convert certain drugs that have close to 100% bioavailability from the IV to the oral formulation after specific criteria are met.

All pediatric doses are verified prior to administration for patients under 14 years old. This includes

calculating the appropriate dose against the patient's weight and age. Pharmacists monitor VTE prophylaxis (chemical or mechanical) and make recommendations as deemed appropriate based on the patient's VTE risk score. In addition, patients are appropriately monitored while receiving anticoagulants in compliance with the Anticoagulation Safety policy. Pharmacists complete Coumadin education for patients who are either starting on Coumadin therapy or who are on chronic Coumadin therapy at home. These patients are evaluated for a baseline INR prior to the first dose of Coumadin received and then followed daily to ensure their INR is within the therapeutic range based on indication.

A Pharmacist responds to code blues and traumas during pharmacy hours. Pharmacists assist Case Management in following Core Measure compliance for indications such as CHF, AMI, stroke and VTE. A drug regimen review is done by a pharmacist for each Swing bed patient during patient care conferences at least once weekly. This review includes recommendations to the patient's provider and nursing staff regarding their drug therapy.

Pharmacists review records of patient home medication list on admission, transfer and discharge to ensure that accurate records are obtained. This process often involves obtaining information from the physician's office, the patient's pharmacy, or if necessary, interviewing the patient to clarify their home medication list. If medications are not restarted on admission, the *(continued, next page)*



EPHRAIM MCDOWELL HEALTH: CRITICAL ACCESS HOSPITAL SERVICES »

pharmacy will follow up with the physician unless it is determined that those medications are being held for a specific purpose.

Currently, the medication reconciliation process is as follows: a list of home medications is obtained by the admitting nurse, a medication profile is obtained from the patient's pharmacy, the reported list of home medications and the medication profile from the pharmacy are compared and any discrepancies are corrected. Lastly, home medications are compared to the medications ordered as an inpatient. Upon transfer or discharge, the medications are reviewed and a complete list is provided to the patient. Any discrepancy or concern is clarified with the prescriber at all transitions of care.

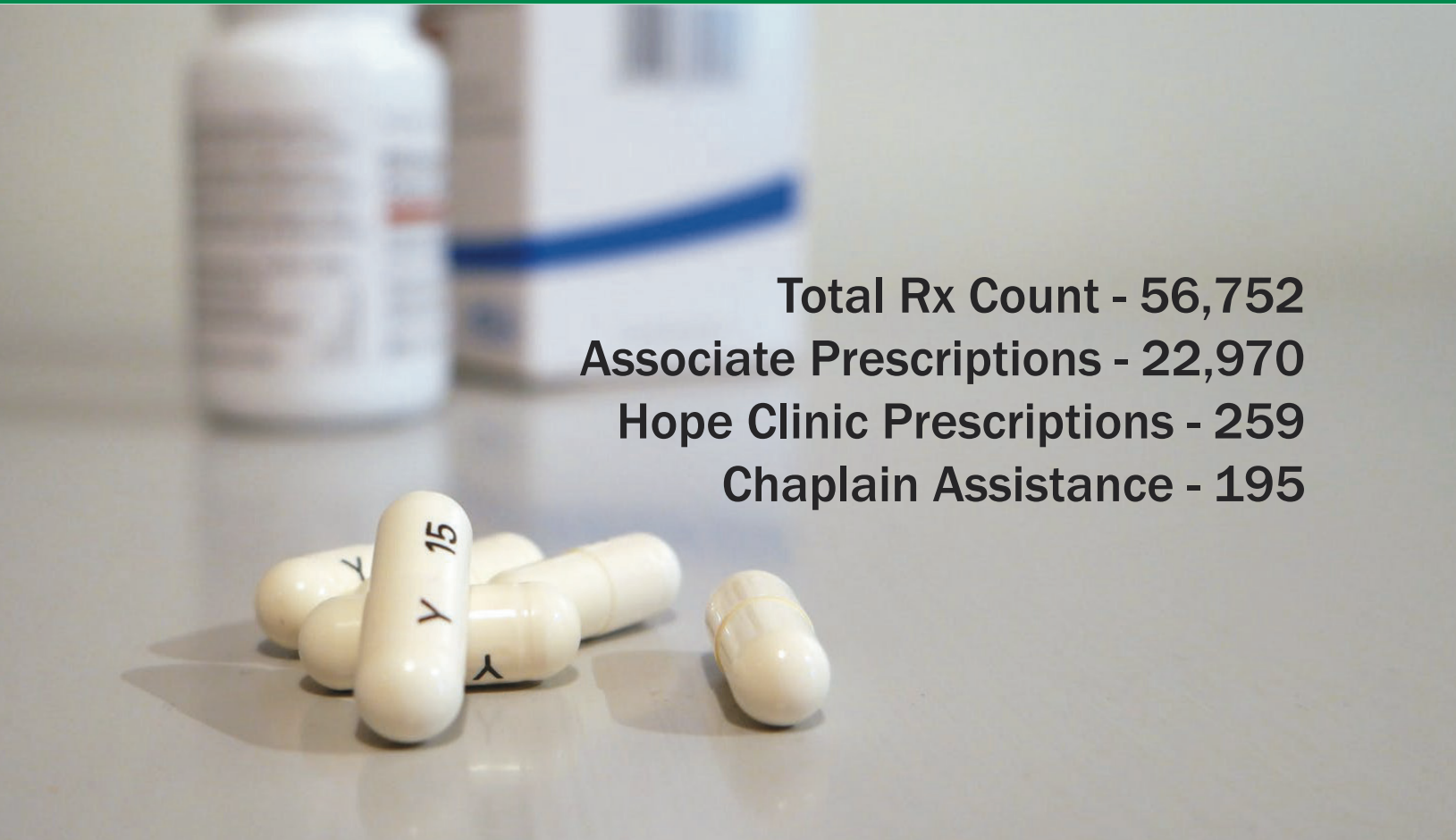
In addition to clinical services, the Pharmacy department provides a full scope of pharmacy services that include maintaining a formulary, providing drug information to nursing and medical staff, procurement of pharmaceuticals, and reconciliation of narcotics through the evaluation of narcotic waste reports and random audits. The Pharmacy Manager attends the EMH Pharmacy & Therapeutics committee meetings and information is brought to the EMJBH Medical Staff Committee meeting for approval. The hospital has implemented processes to enhance patient safety including bedside medication verification (BMV), CPOE

(Computerized Physician Order Entry), utilization of Omnicell automated cabinets, and Sigma Spectrum Smart Pumps.

There has been a significant opportunity for error reduction. Safety issues such as high risk medications and LASA drugs (look alike-sound alike) are emphasized prior to administration of certain high-risk medications and the annual development of a look alike-sound alike list based on surveys submitted to each unit.

Compliance with Joint Commission's standards is a priority at JBH, and Pharmacy has played a key role in leading the medication management chapter to promote JC readiness through staff education. Pharmacy has representation on several committees. Adverse drug reactions and variations from standard practice are reported by the Pharmacy Department via the Occurrence reporting process. EMRMC Outpatient Pharmacy delivers prescriptions to EMJBH Associates with same day pick-up. In addition, the Pharmacy provides an Anticoagulation Clinic Service which provides care to patients taking Coumadin (warfarin). A collaborative care agreement exists between the patient, pharmacist and referring physician. Pharmacists check the patient's INR regularly using a point-of-care system and adjust dosing based on INR results per protocol.





Total Rx Count - 56,752
Associate Prescriptions - 22,970
Hope Clinic Prescriptions - 259
Chaplain Assistance - 195

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 discharged 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 and James B. Haggin Associates are filled

at Ephraim McDowell Outpatient Pharmacy and sent via courier to those hospital pharmacies 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.

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 opt-in for prescriptions. With this option, patients pay two copays for three months of medication.



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 multi-disciplinary 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.

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. Home INR monitoring was implemented during 2018-2019, increasing the number of patients followed by the Anticoagulation Clinic.

Population Served FY2018/2019

Number of visits: 3240

Number of in range INRs: 2273

70.1% of visits in range (above national average)

Vaccinations Given FY2018/2019

Influenza: 179

Pevnar 13@: 4

Pneumovax 23@: 3

Adacel ® (Tdap): 24

Shingrix ®: 251

Hepatitis A: 1202

To help kick off flu season, the Outpatient Pharmacy offers three 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.

The Outpatient Pharmacy will implement Kentucky Board of Pharmacy approved protocols during the first quarter of FY2019-2020. Five pharmacists were trained through an accredited ACPE program to use the Streptococcal Pharyngitis and Influenza Testing protocol in August 2019.



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.

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.

Total CMR completed: 450 paid claims
Successful CMR completion: 151

The Outpatient Pharmacy is assessed by the Medicare Star Ratings system. Each year, specific star measures are targeted for the PI dashboard. 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

FY2018/2019

Adherence to cholesterol medications: 82.6%
Adherence to hypertension medications: 81.9%

» We are now recruiting patients for our pharmacist-led Transitions of Care Heart Failure Clinic.



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®.



AMBULATORY PHARMACY SERVICES»

Ephraim McDowell Commonwealth Cancer Center

Michelle Fraley, PharmD, BCPS

Pharmacist-In-Charge, Ephraim McDowell Commonwealth Cancer Center

- 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

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
- Successful accreditation survey

Evidence-based Chemotherapy Treatment Review

- Clinical Pharmacist review of all intravenous chemotherapy treatment plans

Oral Chemotherapy Adherence

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

Investigation Services

- Oversee 16 active studies; 8 have deferral to Central IRB and 8 are overseen by local IRB
- Handle receipt of investigation medications
- Maintain storage and disposal of medications



EMRMC: INPATIENT PHARMACY OPERATIONS»

2018-19 Medication Management Service

Multidisciplinary medication management and safety teams are led by our pharmacy managers at each of our three hospitals. The medication management and safety teams (EMRMC= Mercedes, FL= Jaguars and JBH= Benz) meet monthly and focus on compliance with best practices for medication management, Joint Commission medication management standards and medication safety initiatives. Front line staff and clinical managers or Clinical Directors from nursing, clinic office managers or nurses, pharmacy, respiratory therapy, risk management and other disciplines involved in medication management are members. These teams trace compliance with Joint Commission management standards, observe for practice and documentation in compliance with established policy and procedures, and monitor safety metrics which involve medication use or outcomes. The teams develop and distribute educational newsletters documents (PitStop newsletter), learning modules, inservices and survey preparation FAQs to keep front line staff up to date on medication related best practices, safety goals, policies and Joint Commission standards. Monthly medication safety huddles on patient care units with front line staff help identify problem areas and concerns for the teams to address.

Medication Safety is a key focus for EMH Pharmacy. In 2018-19 EMH completed numerous projects to advance our use of technology or to help us keep patients safe.

- Upgraded Omnicell automated dispensing cabinets and anesthesia workstations at EMRMC & Fort Logan
- New Controlled substance dispensing cabinet at Fort Logan
- Implementation of Medkeeper technology at EMRMC, FL and Cancer Support Clinic to allow appropriate tracking of sterile compounding, remote verification of accurate compounding for high risk, batch and patient specific sterile compounds
- Replacement of Alaris Smartpumps at EMRMC, FL and Cancer Support Clinic
- Achieved >95% medication barcode scanning rates for EMRMC, FL and JBH
- Modification of Hazardous drug waste handling and disposal process
- In room secure medication storage boxes at EMRMC acute patient care units
- Naloxone education and dispensing events to all counties in our service area
- Kentucky Statewide Opioid Stewardship membership and regional training sessions
- Opioid stewardship naloxone use outside the ED metrics
- Creation of Illicit substance handling policy
- Opioid naïve screen upon admission assessment
- Substance Use screening updated to include opioid history
- New opioid withdrawal protocol implemented
- MUE for clinic controlled substance prescribing and compliance with chronic CS prescribing agreements and KASPER reviews
- Participated in Leapfrog survey
- Decreased Hypoglycemic events
- Modification of access and dispensing of paralytics to include time out prior to administration outside the OR
- Gap analysis for safe injection practices
- Updated sterile compounding labeling with beyond use date information
- Modified eMAR to display comment lines (instructions more visible to end user)
- Identification of direct acting oral anticoagulants (DOACs) on eMAR with prompt to educate patients
- Add patient education on DOACs to warfarin education pharmacy service
- New Anticoagulant ordered view for Nursing and Pharmacy status boards that identifies patients receiving anticoagulants
- Updating drip orders with dosing initiation, increments of time for titration, max dose/parameters
- Reduced duplicate medication orders

(Continued)



EMRMC: INPATIENT PHARMACY OPERATIONS»

- Created bowel regimen order set to prevent therapeutic duplication
- Created transition of care consult for medication orders for patients transitioning to FL or JBH swing bed
- Implemented swing bed discharge counseling at FL and JBH
- Implemented barcode scanning for breast milk
- Ketamine analgesic dosing protocol and education
- Nasal medication dosing protocol
- New premixed insulin drips stocked in Omnicells
- Created Epinephrine and Dextrose 50% kits during Abboject backorders
- Updated IV drug handbook references
- Vaccine education for flu and pneumonia vaccines
- On boarded new clinics under each hospital, provided education on MM and Med safety NPSGs
- Upgraded clinics to vaccine grade medication refrigerators
- Replaced EMRMC central pharmacy medication/vaccine refrigerator
- Annual look alike-sound alike Associate survey
- Annual high risk medication Associate survey
- Annual Culture of Safety Associate survey

EMH facilities utilize barcode scanning for medication administration and Alaris Guardrails smart pumps to optimize medication safety during the medication administration process. Pharmacist and specially trained certified pharmacy technicians conduct medication reconciliation with patient at admission and discharge to promote safe transitions of care. Pharmacists review and update evidence based protocols and order sets annually. EMH hospitals utilize Omnicell automated dispensing cabinets in inpatient and outpatient patient care areas. High level screening for dispensing reports is conducted routinely from transactions across our Omnicell cabinets, anesthesia workstations and controlled substance dispensing cabinets to detect and prevent diversion. Pharmacists perform time outs for designated high risk medications preparation and dispensing and use Medkeeper technology to track and remotely verify high risk admixtures and batch admixture sterile compounding at EMRMC, Fort Logan and Cancer Support clinic. Risk management provides medication error and adverse event data for review and trending. Each medication management team participated in intracycle monitoring and mock surveys to assess effectiveness of our medication management systems.



Photo source: Medkeeper



EMRMC: INPATIENT PHARMACY OPERATIONS»

Guardrails® Suite Usage: 2017

- January – April: 89%
- April – July: 86.3%
- July – September: 86.8%

Current Period		Current Period		Current Period	
Highest Compliance	Lowest Compliance	Highest Compliance	Lowest Compliance	Highest Compliance	Lowest Compliance
CANCER CENTER (98 %)	Peds 10 kg or less (76 %)	Epidural (100 %)	Peds > than 10 kg (66 %)	CANCER CENTER (97 %)	Peds > than 10 kg (66 %)

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%	-9%
Critical Care	91%	91%	0%
Epidural	96%	100%	-4%
Labor Hall	77%	79%	-2%
MED/SURG	82%	82%	0%
Peds > than 10 kg	69%	66%	3%
Peds 10 kg or less	82%	98%	-16%
Training	83%	N/A	N/A
Total Guardrails® Compliance	87%	87%	0%

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 CQI 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



Total Suite Usage (%) Overview			
Ephraim McDowell Reg Med Center			
Current Period: 07/01/2018 - 09/30/2018			
Previous Period: 04/01/2018 - 06/30/2018			
Total Suite Usage (%) by Profile			
Profile	Current Period	Previous Period	Difference
CANCER CENTER	98%	98%	0%
Chemotherapy	92%	91%	1%
Critical Care	89%	91%	-2%
Epidural	100%	98%	2%
Labor Hall	77%	85%	-8%
MED/SURG	83%	81%	2%
Peds > than 10 kg	48%	83%	-35%
Peds 10 kg or less	79%	79%	0%
Total Guardrails® Compliance	87%	87%	0%

Total Suite Usage (%) Overview			
Ephraim Fort Logan Hospital			
Current Period: 07/01/2018 - 09/30/2018			
Previous Period: 04/01/2018 - 06/30/2018			
Total Suite Usage (%) by Profile			
Profile	Current Period	Previous Period	Difference
Critical Care	78%	81%	-3%
Epidural	100%	98%	2%
Labor Hall	75%	74%	1%
MED/SURG	82%	83%	-1%
Peds > than 10 kg	N/A	100%	N/A
Peds 10 kg or less	100%	27%	73%
Total Guardrails® Compliance	79%	80%	-1%

EMH Medication Management Service

Monthly multidisciplinary Medication Management team meetings are led by pharmacists at each facility. The Mercedes, Jaguars 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, Jaguars 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/Omniceil 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. Medkeeper technology is used for high-risk chemo sterile compounding at EMRMC and Cancer Support Clinic. Opioid stewardship metrics are monitored through Mercedes, Jaguars, Benz and P&T Committees.



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 James B. Haggin Hospital, Ephraim McDowell Commonwealth Cancer Center, and Ephraim McDowell Clinics using LSS (25 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
- Go HC labels barcode software
- Medkeeper® IV Workflow Management

Dictionaries Supported

- Outpatient medication dictionary (Meditech RXM)
 - Monthly formulary 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
 - New cabinets installed 2019
 - 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
- Medkeeper databases
 - Items and recipes maintenance

Ephraim McDowell Clinics & MedSource

EMRMC Pharmacy provided services to 25 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 and vaccines from respective hospital pharmacy for clinic stock. The medications are provided to each clinic via hospital courier on a daily basis.

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, 9 elective

Happenings:

- In June 2018, Stephen Crutcher, PharmD and Porter Lee Ramsey V, PharmD successfully completed our PGY1 pharmacy residency program.
 - Lee accepted a position as a clinical staff pharmacist at Hardin Memorial Hospital in Elizabethtown, Kentucky.
 - Stephen accepted a clinical staff pharmacist position at EMH, where he will be working in both outpatient and inpatient pharmacy. He also will be precepting Internal Medicine for the PGY1 program.

The MATCH for 2018-19:

- 22 Applications submitted to Phorcas
- 16 candidates invited to interview
- Successfully matched two candidates in Phase I of the Match

- In June 2018, Megan Ballard, PharmD, MBA, and, Katie Martello, PharmD, both recent graduates from the University Of Kentucky College Of Pharmacy, joined our team to complete our residency program.

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
- Anticoagulation Counseling
- Patient Case Presentations
- Journal Clubs
- Medication Use Evaluations
- Drug Monograph Development
- Immunizations



LEADERSHIP & SERVICE»



EMH Leadership Academy participant this year – Stacy Rider, PharmD

– KPhA/KPERF Reviewer – The Kentucky Pharmacist

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 Pharmacy Practice Committee
- KSHP Award and Nominations Committee (2 members)
- KSHP House of Delegates representatives
- 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

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
 - Kentucky Agency for Substance Abuse Policy Board - Brenda Wilson
 - Wilderness Trace Child Development Center Board Members - Mary Covell, Kourtney Shewmaker

Research Funded Professional Development Scholarships

We recently developed the Research Funded Professional Development Scholarship to utilize our funds from the QUANTUM-AF research project. This allows pharmacists and technicians to apply for funds to use for educational travel or for purchase of educational programs. The expectation is that the participant is responsible for sharing a “pearl” or other presentation with members of the EMH team afterwards.



LEADERSHIP & SERVICE»

Four technicians and seven pharmacists had applications approved in our first round. Congratulations to the following Associates for receiving scholarships:

- Matt Acton - ASHP Sterile Product Preparation Certificate Program
- Megan Ballard - ASHP Emergency Medicine Certificate Program
- Amanda Burton - ASHP Pharmacy Informatics Certificate Program
- Kim Campbell - PowerPack MTM Certificate Program
- Stephen Crutcher - ASHP National Preceptors Conference
- Joan Haltom - ASHP Medication Safety Certificate Program
- Karen Hamm - NBPAS Prior Authorization Specialist Certificate Program
- Karla Myers - ASHP Compounded Sterile Preparations Certificate Program
- Heather Robertson - PowerPack MTM Certificate Program
- Kourtney Shewmaker - USP 800 eLearning Program
- Brett Vickey - ASHP Pharmacogenomics Certificate Program





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