

CookChildren's



Expanding and Improving Clinical Practice by Advancing Student Pharmacist and Pharmacy Technician Roles

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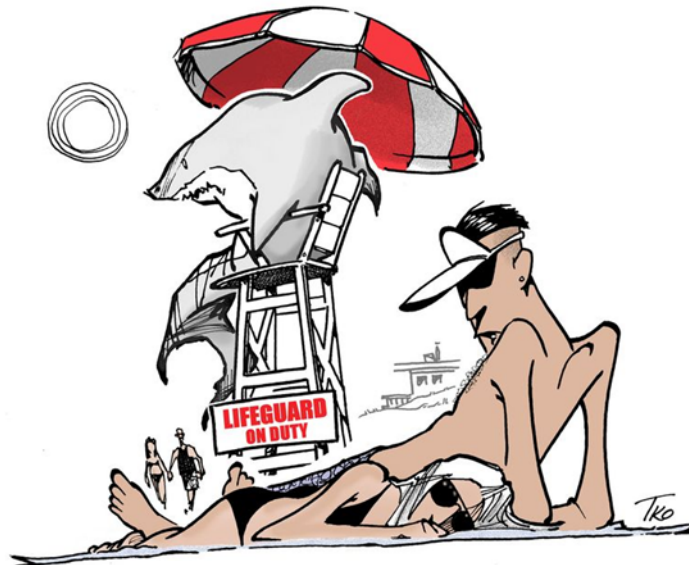
Clinical Pharmacy Manager

PGY1 & PGY2 Residency Program Director



Disclosure

- I do not have any relevant financial relationship with any commercial interests.



"So, I'm the only one who sees a conflict of interest here?"



Objectives: Pharmacist

- Describe examples of advanced roles for pharmacy technicians and student pharmacists
- Identify functions technicians and student pharmacists can perform that allow for more focus on clinical practice for pharmacists
- Apply objective approach to justifying services using existing or new staff



Objectives: Technician

- Describe examples of advanced roles for pharmacy technicians and student pharmacists
- List benefits of advanced tracks for pharmacy technicians and student pharmacists
- Discuss methods for identifying services that can be started or transitioned to pharmacy technicians or student pharmacists



Welcome to Cook Children's Healthcare System

- Fort Worth, TX
- Fully integrated healthcare system
 - 6 county referral area
- 432 bed tertiary care medical center
- Level II Trauma
- Level IV NICU
- Nationally renowned specialties





Pharmacy Department

- ~170 FTE
- Fully decentralized clinical services
- 24/7 distribution service
- Retail Pharmacy
- Satellites
 - Outpatient Clinic Pharmacy
 - Operating Room
 - Ambulatory Surgery
 - Emergency Services
 - H/O Clinic-Grapevine, TX
 - Northeast Hospital/Clinic & Urgent Care Center-Hurst, TX





Traditional Roles for Pharmacy Technicians

- Distribution
 - IV and PO medication preparation
- Leadership
- Purchasing/Inventory
- Billing
- Automation
- Technician verification “Tech check Tech”



Voting Link

- <http://etc.ch/yhHA>





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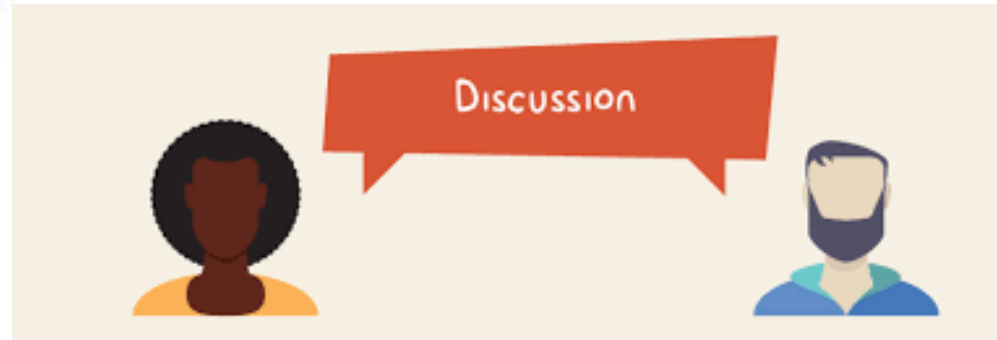
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Group Activity

- What current roles do technicians serve in your organization?
- What is on your wish list?





Making the most of pharmacy

Proportion of work appropriate for pharmacy technicians in anticoagulation clinics

TECHNICIANS AND PHARMACISTS VISUAL CHECKS FOR FINAL
product verification

teaching medical center



Our Journey

- ASHP PPMI (now PAI)
 - Section D-Advancing the use of pharmacy technicians
- Planning and Implementation
 - 2011 Leadership Retreat
 - 2012 “Year of the Tech”



Tech Roles to Discuss

- Clinical Technician
- Medication History/Reconciliation
- Medication Safety
- Patient Assistance Program
- Transition Technicians

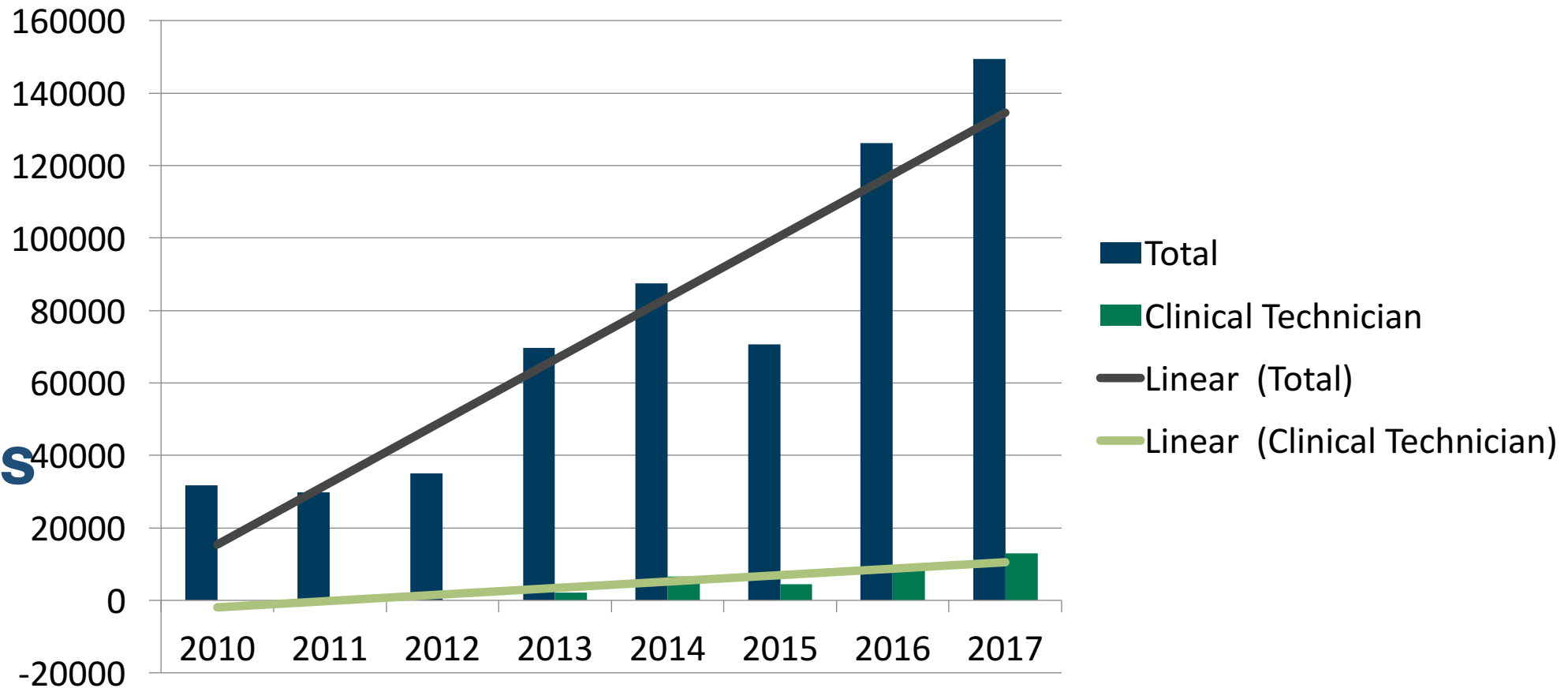


Clinical Pharmacy Technician

- Decentralized Services
- Barriers to clinical practice
- Job satisfaction and career development
- Pilot-Pharmacy Interns Summer 2012
- Position justification based on increased clinical functions of pharmacists
- 4 Positions approved for FY12 and began April 2013



Clinical Pharmacy Technician Impact on Clinical Interventions





Medication History/Reconciliation

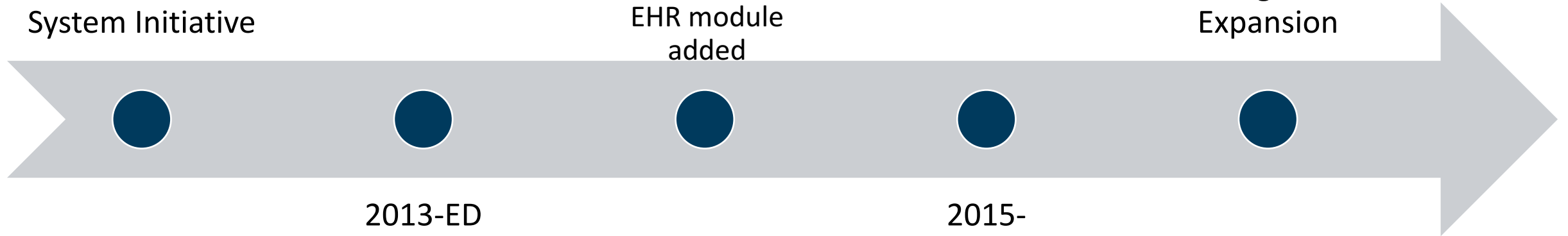
2012-
Medication
Reconciliation
System Initiative

2014-Intern
program
expanded, New
EHR module
added

2017-Intern
Program
Expansion

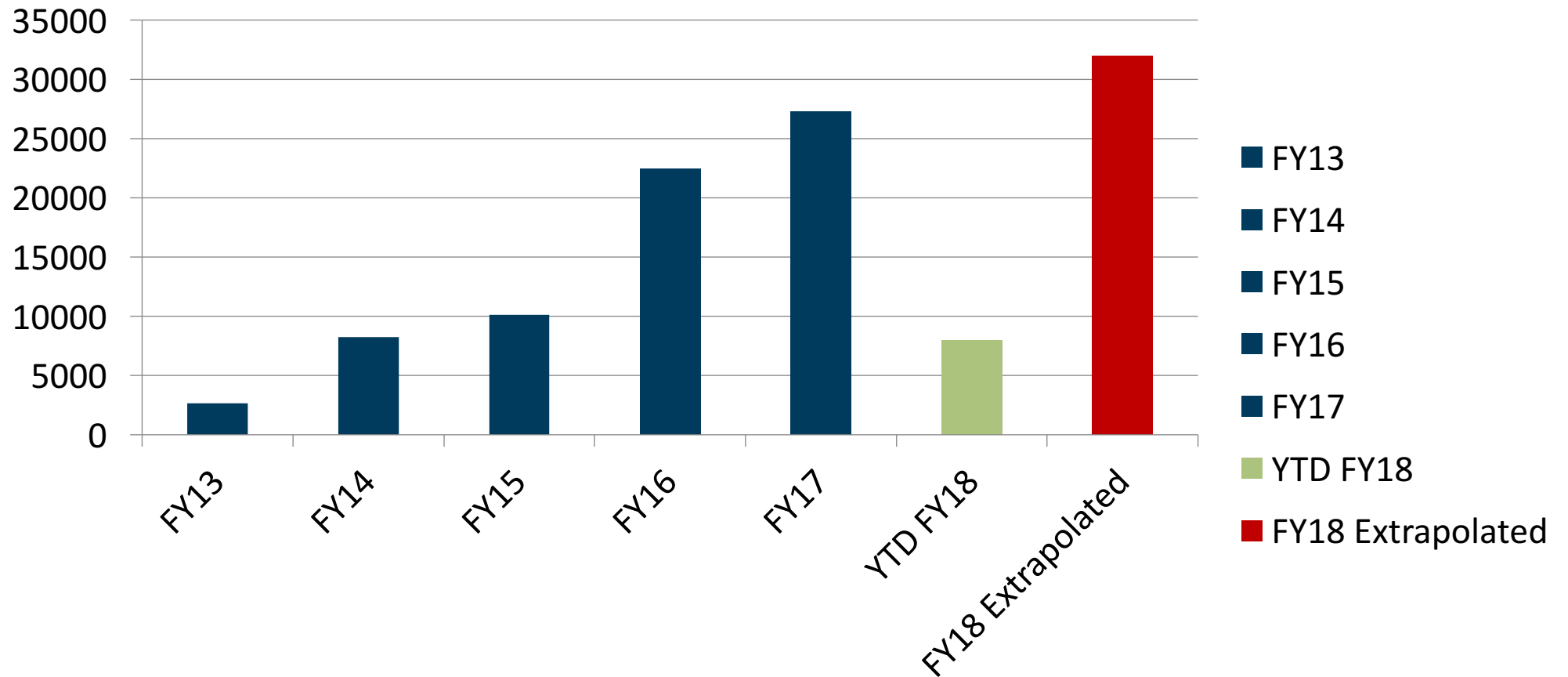
2013-ED
student APPE

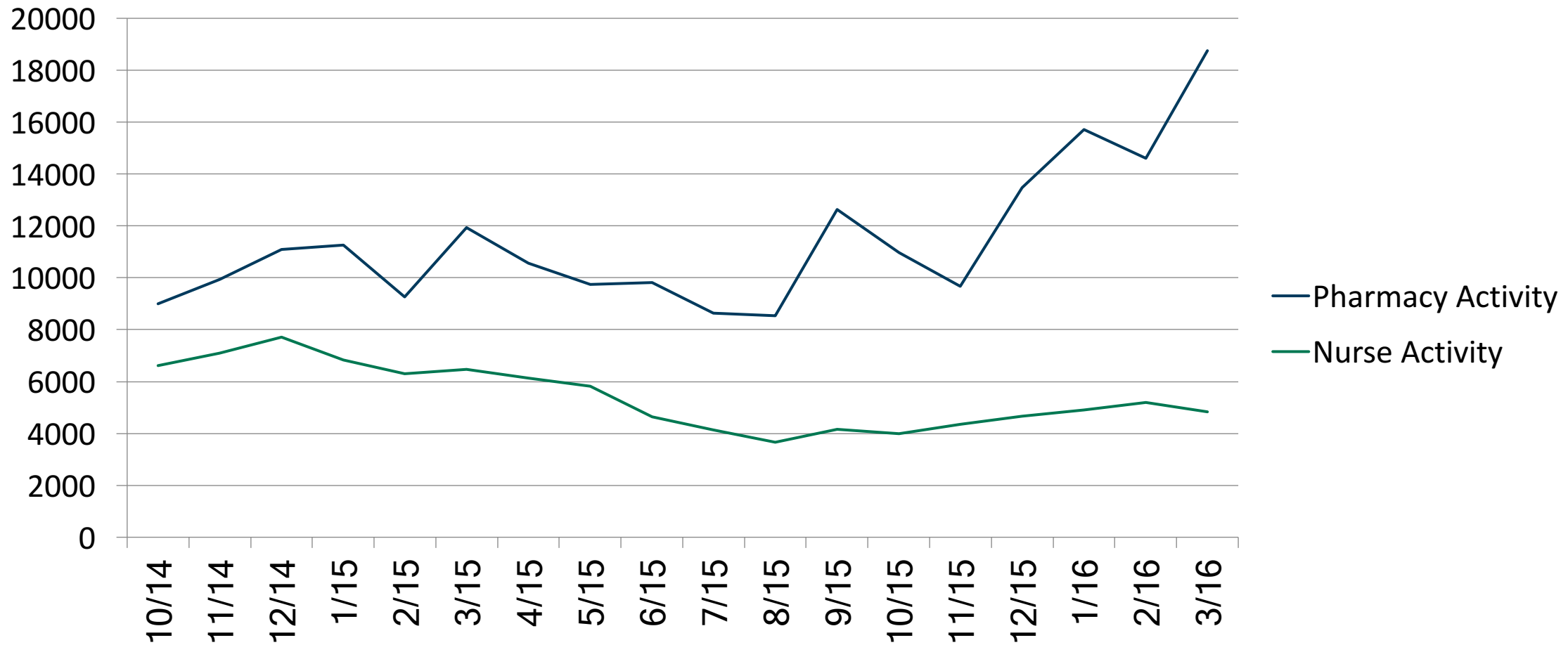
2015-
Medication
Reconciliation
Techs





Medication Histories

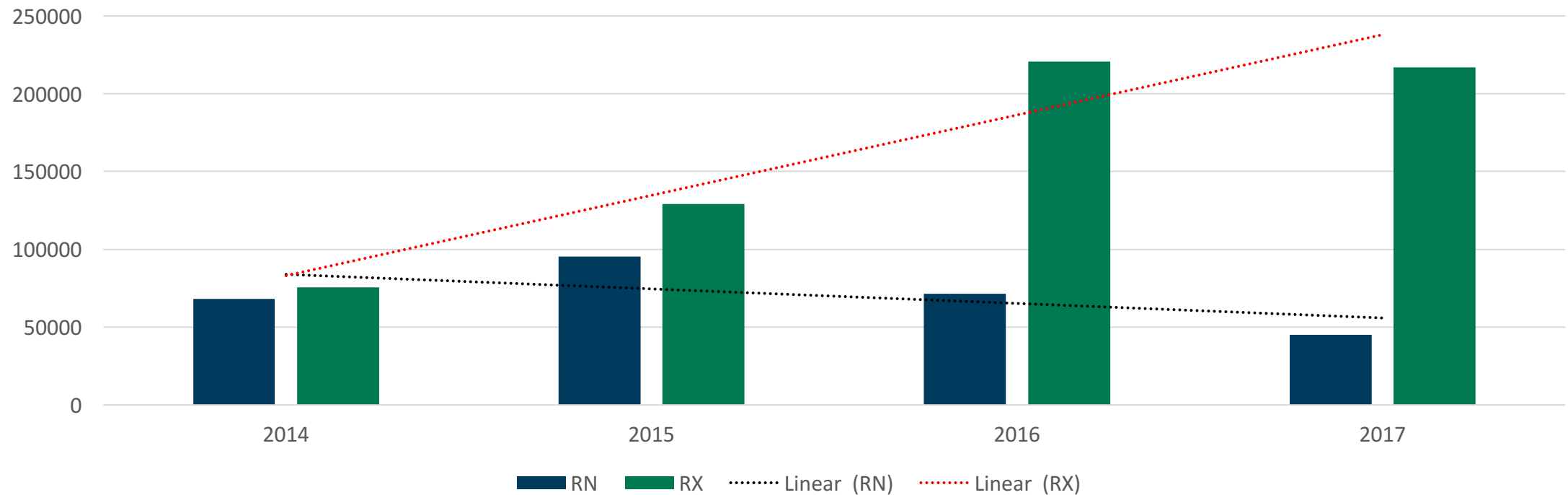


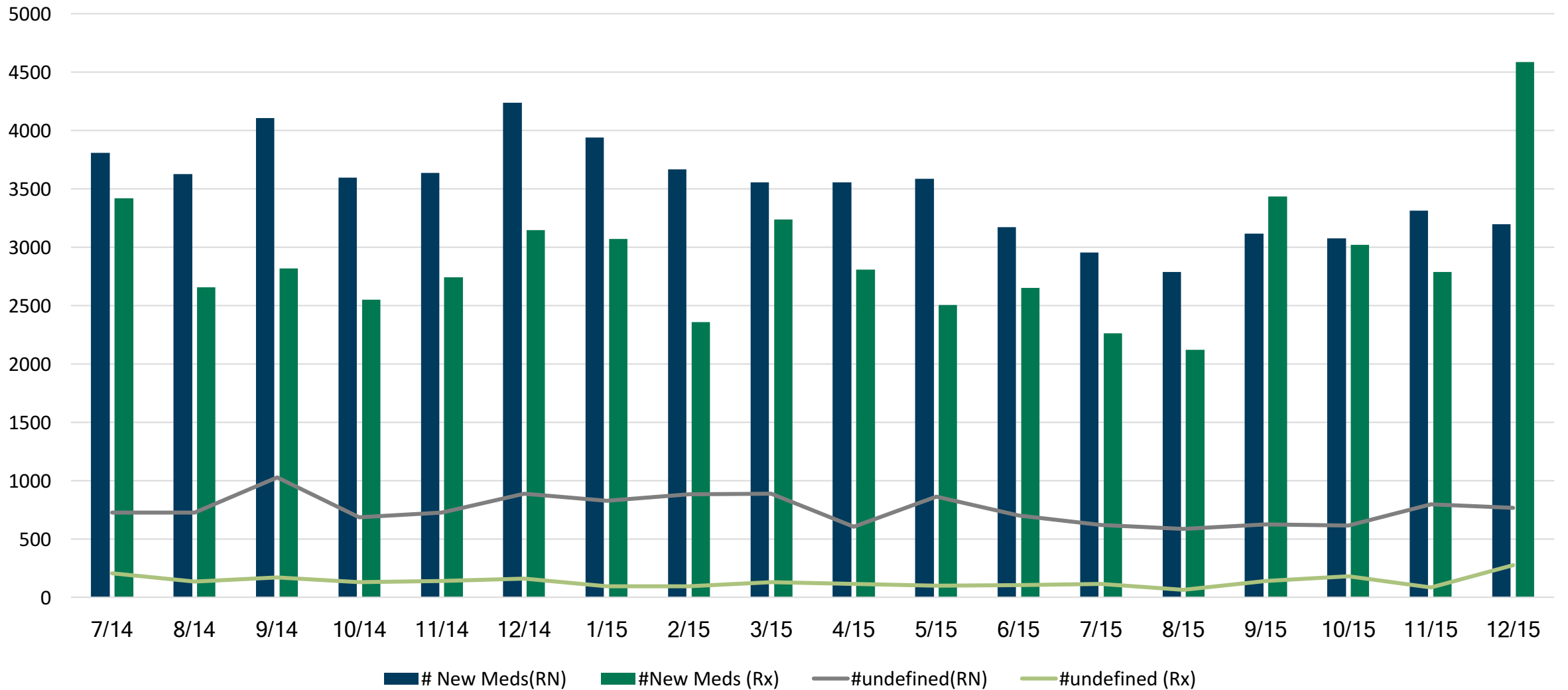


*Activity=any drug added, d/c's, edited, or reviewed in the EHR medication reconciliation module



Medication Histories Pharmacy vs Nursing



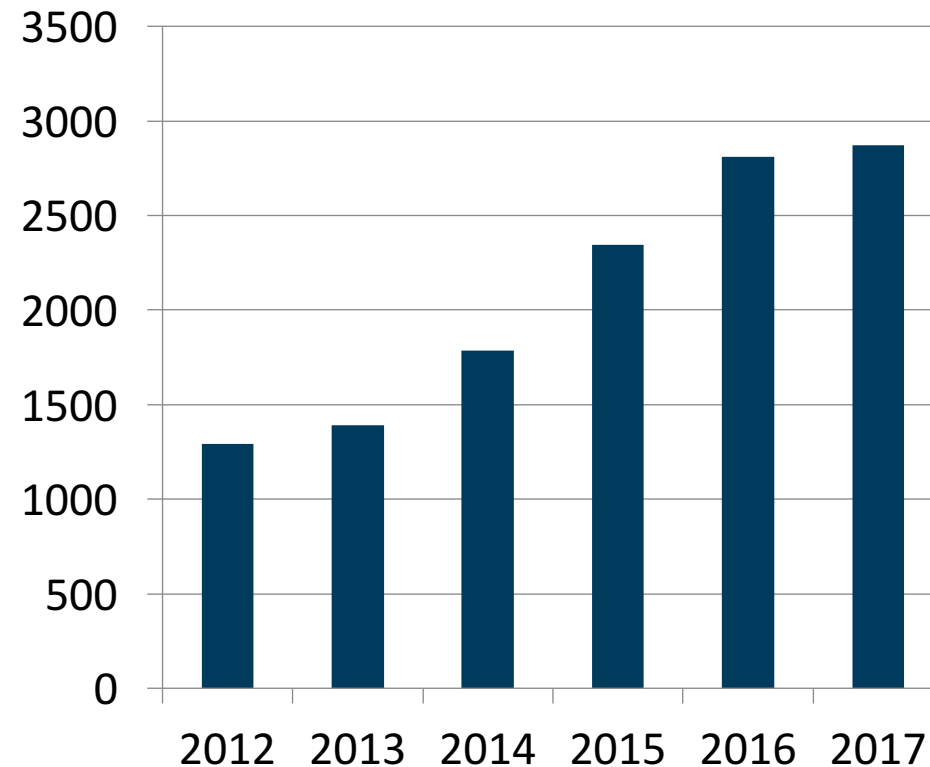




Medication Safety

- Timeline
 - 2009-2012 → Pharmacist position approved for Medication Safety
 - 1/2012 → 0.5 FTE technician position approve to assist medication safety specialist
 - 12/2012 → Position expanded to 1.0 FTE
- Responsibilities
 - Event and near miss investigation
 - Process improvement and prevention strategies
 - Promotion of safety culture (Zero Harm)

Events Reviewed





Patient Assistance Program

- Assist uninsured or under-insured patients with procurement of needed medications
- Medication compliance → readmissions
- Many programs available through manufacturers, charities, etc
 - Not easy for a patient/caregiver to navigate!






Patient Assistance Program

	2012	2015	2016	2017
# Scripts	1218	2567	3031	2500
Cost of Medications to Organization	\$54,593	\$153,827.12	\$203,939.79	\$207,876.90
Rebates & Product Replacement	\$13,700.19	\$31,018.03	\$39,264.39	\$33,575.77
Amount Collected from Patients	\$2,404.27	\$7,141.37	\$11,200.47	\$10,462.50
Charity written off by organization	\$38,489.17	\$146,685.75	\$192,739.33	\$197,414.40

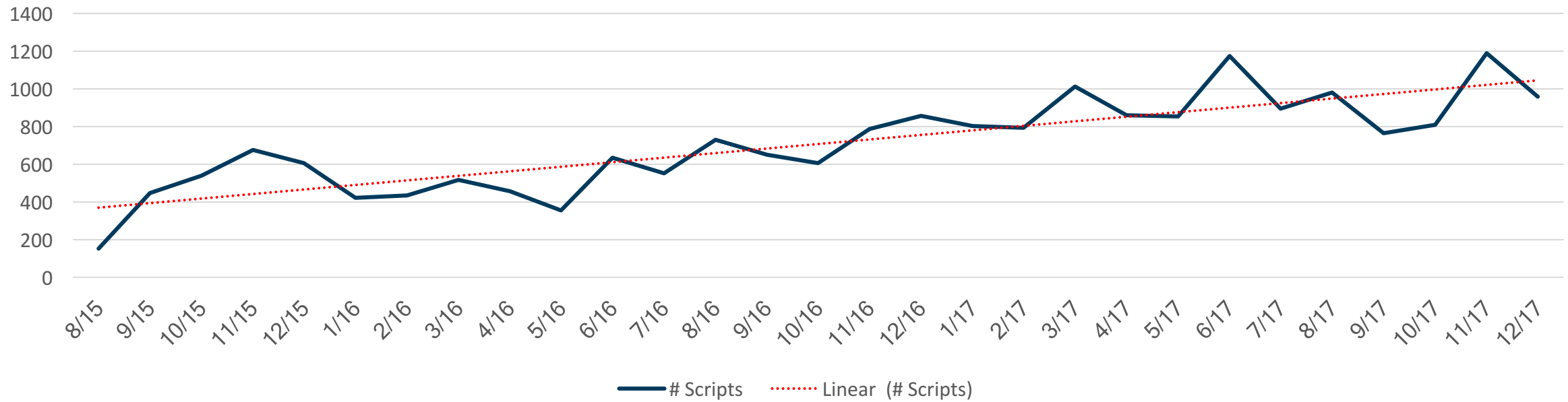


Transition Technician

- Campus footprint and expansion 
- Retail pharmacy opened in Nov. 2013
- Need for increased marketing and presence
- Two technicians stationed in ambulatory surgery center
ASC/PACU and Hematology/Oncology
- Promote relationships with physician groups
 - Future → specialty clinics=refills!!



Scripts





Justifying Services

- Identify need or problem area
- Pilot!
- ROI → Can be hard dollars, costs avoided, or quality improvement
- Get administration and HR involved in seeing the front-line
 - More than just a fancy PowerPoint, tell a story



Organizational Benefits

- Quality and Safety
- Cost savings
- Employee satisfaction
- Professional and career development
- Expanded awareness of complexities of patient care
- Improved productivity
- Practice Advancement



Student Pharmacists

- It started off as a simple summer intern program
- Morphed into a CRAZY idea for student APPE rotations
- Evolved with expanding technician staffing
- Expanded into a robust internship program that was well worth the investment



Advanced Pharmacy Practice Experience

OATH OF A PHARMACIST

At this time, I vow to devote my professional life to the service of all humankind through the profession of pharmacy.

I will consider the welfare of humanity and relief of human suffering my primary concerns.

I will apply my knowledge, experience, and skills to the best of my ability to assure optimal drug therapy outcomes for the patients I serve.

I will keep abreast of developments and maintain professional competency in my profession of pharmacy.

I will maintain the highest principles of moral, ethical, and legal conduct.

I will embrace and advocate change in the profession of pharmacy that improves patient care.

I take these vows voluntarily with the full realization of the responsibility with which I am entrusted by the public.

Joani Kaye Lovell

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
AACP



State of Affairs

- Nursing-obtained medication histories
 - Entered into EMR
 - Reviewed by pharmacist
 - Discrepancies communicated with prescriber



Problem

- Quality
 - 12% of histories complete and accurate
 - Discrepancy Rate=24%
- Utility
 - Prescribers did not make use of the list
 - Errors were perpetuated from inaccurate home medication list
- Resources



Opportunity Knocks

- New module added to EMR
 - Improved medication entry
 - Provider chooses which medication to continue, discontinue, or modify
- Sound great!
- However...



Defining Outcomes

- What is best for our patients?
- What does complete and accurate medication reconciliation entail?
 - Obtain the medication list on admission
 - Pharmacist-compare list with admission orders
 - Admitting physicians-address home medications when entering admission orders
 - Document and clarify any discrepancies
 - Ensure list is updated for discharge



Review of the Literature

- Medication reconciliation
 - 363,000 Google search results
 - 710 PubMed citations
- Students and medication reconciliation
 - 130,000 Google search results
 - 26 PubMed citations
- Consistently shown to be beneficial to patient care through improved safety and efficiency
- Enhanced learning experience for students



Connecting the Dots

- PPMI
 - B23k, B26, B27
 - E4m, E4n



- Engaging learners
- ED rotation applicability
- Benefits to the institution



Relationships

- October 2012
 - Initial conference call with Texas Tech University
- Fall 2012-Winter 2013
 - Developed rotation description and schedule for review
- April 2013
 - Held webinars with students assigned to the rotation during the 2013-2014 school year
- May 20, 2013
 - First block of students begin



Rotation Model

- Pediatric Emergency Medicine
- Six-week blocks (8 blocks per academic year)
- Four APPE students each block
- 24-hour, Monday-Friday coverage
- Primary focus on patient care
 - Obtaining medication histories
 - Providing discharge medication counseling



Day-to-day Challenges

- #1: Scheduling and Coordination
- #2: Training
- #3: Student oversight and evaluation
- #4: Student learning
- #5: Student buy-in
- #6: Sustainability



What Didn't Work/ Changes to the Rotation

- Schedule changes
- Inpatient exposure
- Workload
 - Question of the day



Sustainability

- Preventing preceptor burn-out
 - Management support
 - University support
 - Dividing preceptor workload
 - Preceptor development
- Continue current rotation model?



Results

- Med histories completed: May 2013 – August 2014
- **5,050 (Students)** + 1,803 (Interns) = 6,853 histories
- 149,920 ED Visits | 19,671 Admitted

Audit 165 charts: Jul 2012 to Aug 2013

Obtained by:	Nurse	Pharmacy
# of Patients	152	13
# total Meds	332	42
# of incomplete	160	4
% of incomplete meds	48%	10%
# Abbrev.	55	2
% Abbrev. meds	16%	5%
# Med Rec discrepancies	37	9
% Med Rec discrepancies per patient	24%	69%

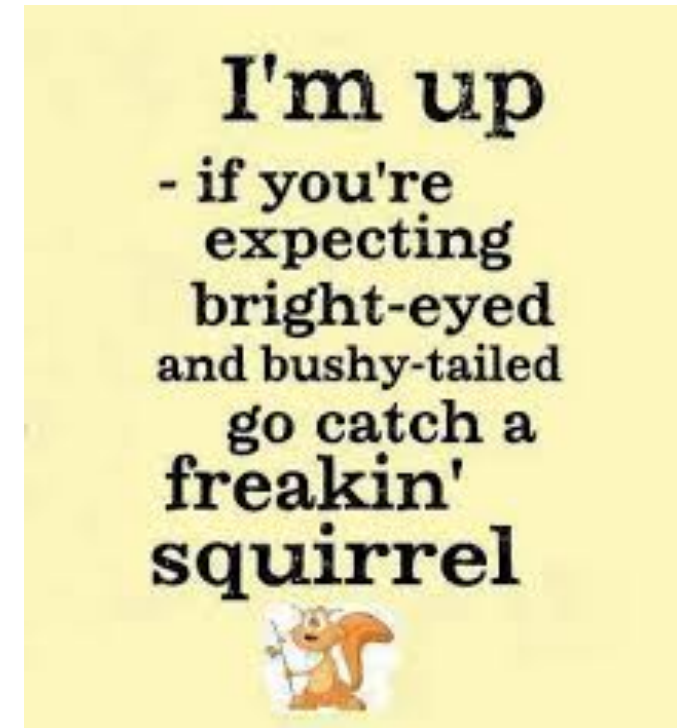
Med Rec Reports: Jul – Aug 2014

2014	July		August	
Obtained by:	Nurse	Pharmacy {Student}	Nurse	Pharmacy {Student}
All Activity	5008	9046 {1460}	5154	8151 {1424}
# New Meds	3781	3418 {1248}	3757	2667 {1211}
%[undefined]	19.5%	6.2% {7.6%}	19.3%	5.2% {6.7%}

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Employed Student Pharmacists





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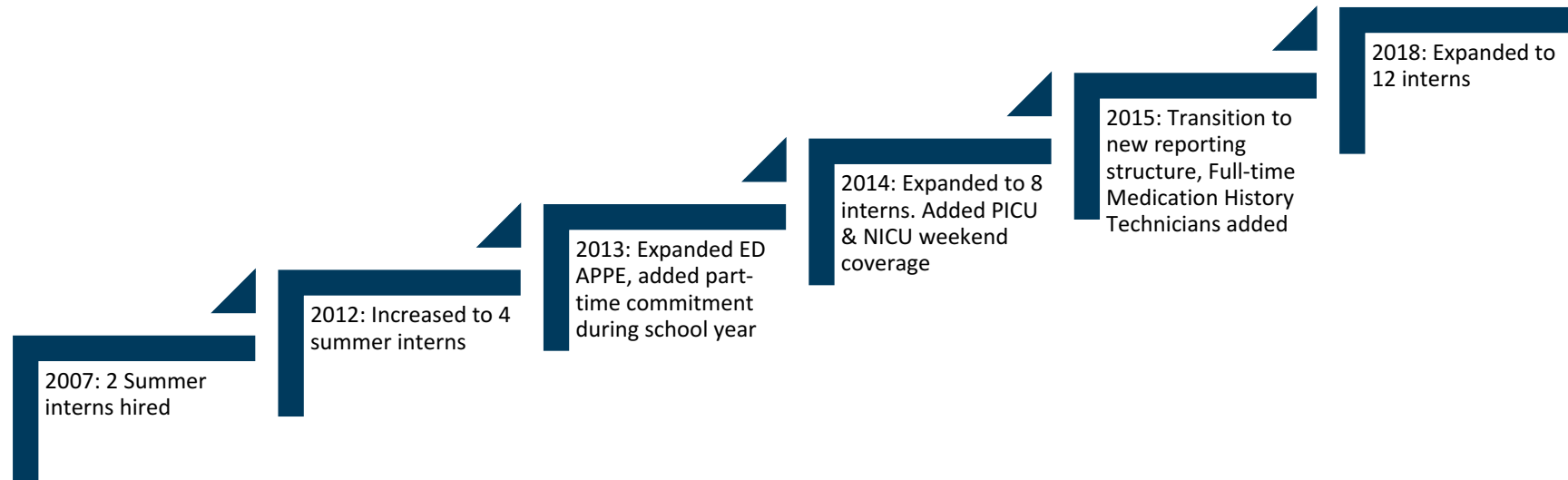
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Our Journey





Justification

- Recruiting future staff
- Staff buy-in
 - Training
 - 12-week interview
 - Expanded teaching opportunities
 - Assistance with research and projects





TRAINING

- Central operations
 - Technician duties
 - Dose preparation
 - Non-sterile compounding
 - Sterile compounding
 - Medication delivery
- Emergency Department
 - Medication histories
 - Discharge counseling
 - Code training
 - Omnicell™
- Patient care units (PICU & NICU)
 - TPNs
 - Reorders, missing doses
 - Immunization tracking
 - Medication Reconciliation
 - Discharge Counseling



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Intern Functions

- Clinical
 - Counseling
 - Specific medications independently
 - Drug use and disease state monitoring
 - Medication Reconciliation
 - Immunization Tracking
 - Assisting RPh responding to codes
 - Medication Histories
- Research/QI projects
- Technical duties



Benefits to the Organization

- Pool of future pharmacists
- Assistance with data collection and analysis
- Relationships with COP
- Expansion of clinical services
- Pharmacists focusing more on clinical duties

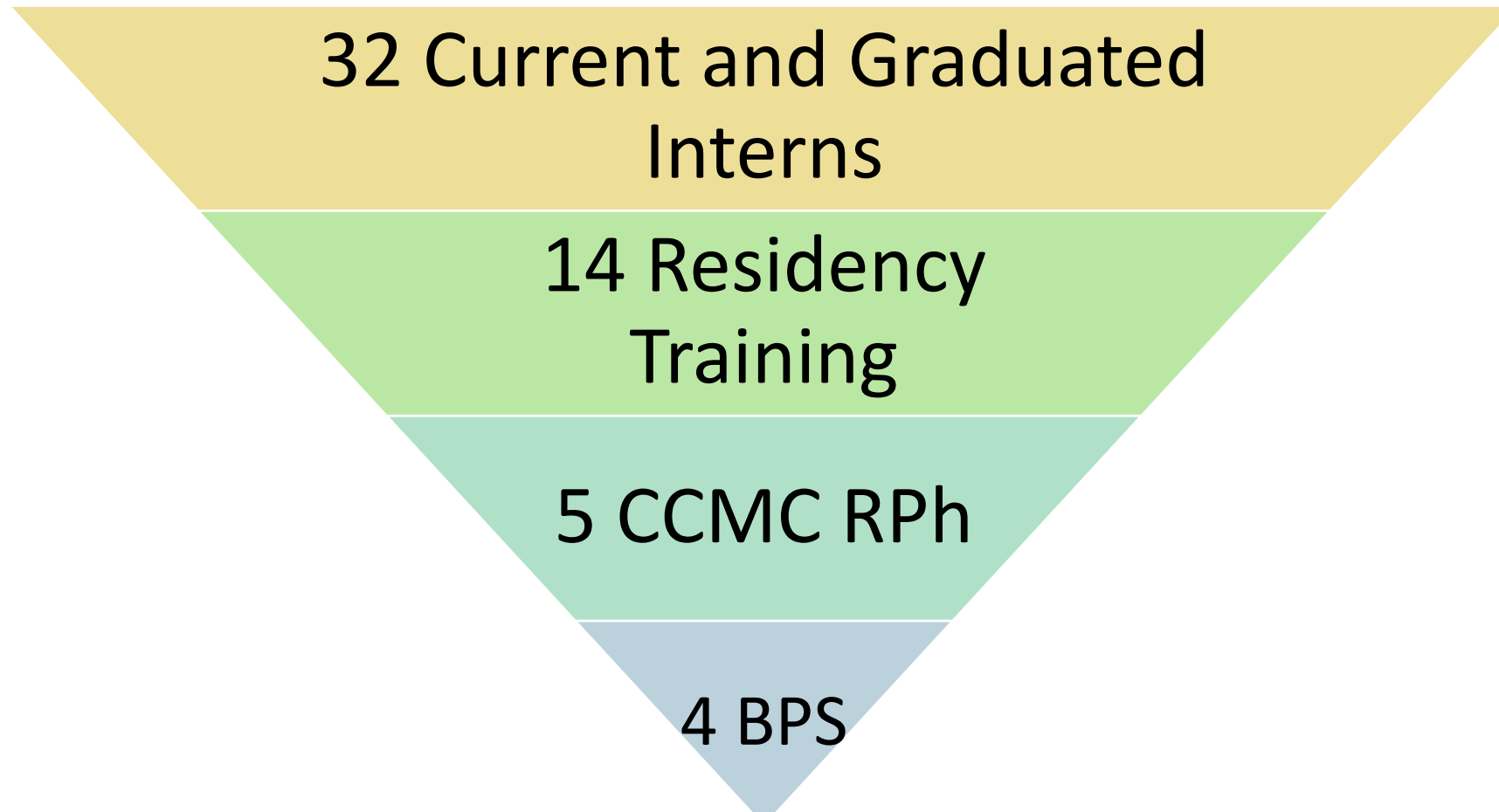


Benefits to Student

- Increased exposure to field of choice
- Edge over applicants for residency and staff positions
- Solidify decision to pursue pediatrics as a career-or NOT
- Develop relationships with pharmacists in your desired career path
 - Mentorship
- Learning about post-graduate opportunities



Where are they now?





Take Home Points

- Evaluating pharmacy services for technician expansion can reap great rewards for an organization
- Utilize a multi-pronged approach when justifying services to administration
 - Know when to hold 'em and when to fold 'em
 - Don't be afraid to strike when the iron is hot
 - Angry doctors=6 medication reconciliation technicians
 - You may not succeed for get everything you want the first attempt-Don't give up!
Do what you can and collect more data.
 - Pilot-STUDENTS!!
- Training, staff selection, and quality assurance is paramount





Take away!

- Utilizing student pharmacists can expand clinical services and enhance learning
- Connect the dots for each group of students-frequently
- Build a strong partnership with a pharmacy school that supports your efforts
- Get feedback from school and students frequently



Claiming Your CE Credit

- <https://tshp.wcea.education/homepage>
- Pharmacist: 6qJF
- Pharmacy Technician: zkrr



