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PHARMACY FOCUS

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FORMULARY UPDATES

Epcoritamab [Epkinyl] is a bispecific T-cell engaging antibody that targets CD3 and CD20. Epcoritamab binds to the CD3 receptor expressed on the surface of T-cells and CD20 expressed on the surface of lymphoma cells and healthy B-lineage cells. Epcoritamab activates T-cells resulting in the release of proinflammatory cytokines, and induces B-cell lysis. It is indicated for relapsed or refractory diffuse large B-cell lymphoma. Common adverse reactions include cytokine release syndrome, fatigue, musculoskeletal pain, injection site reactions, pyrexia, abdominal pain, nausea, and diarrhea.

Eptinezumab [Vyepti] is a humanized monoclonal antibody that binds to calcitonin gene-related peptide ligand and blocks its binding to the receptor. It is used to prevent migraines in adults. Common adverse effects include nasopharyngitis and hypersensitivity.

Nirsevimab [Beyfortus] a respiratory syncytial virus F protein-directed fusion inhibitor, is a human immunoglobulin G1 (IgG1) kappa monoclonal antibody with antirespiratory syncytial virus activity. It is indicated for the prevention of RSV lower respiratory tract disease in neonates and infants born during or entering their first RSV season, and children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season. Associated adverse effects include rash and injection site reaction.

Lecanemab [Leqembi] is a novel humanized monoclonal antibody directed against aggregated soluble and insoluble forms of amyloid beta. It is used in the treatment of Alzheimer disease through the reduction of amyloid beta plaques. Common adverse reactions include emosiderosis including microhemorrhage and superficial siderosis, infusion-related reaction, and brain edema.

IN THIS ISSUE

NATIONAL PHARMACY WEEK

By: Likitha Mamillapalli, PharmD

National Pharmacy Week is observed during the third full week of October and recognizes the invaluable contributions that pharmacists and pharmacy technicians make to patient care in hospitals, outpatient clinics, and other healthcare settings. Statistics show that about 95 percent of the U.S. population lives within 10 miles of a community pharmacy and that the general population visits a community pharmacy almost nine times as often as they see a primary care provider. Pharmacists are such accessible healthcare professionals and continue not only to dispense medications, but also to provide medication counseling and improve health literacy, safety, and accessibility.

Robert J. Ruth, a pharmacist from North Carolina, proposed the first ever “National Pharmaceutical Week” at the 1924 annual meeting of the American Pharmaceutical Association (APhA). A year later, the first pharmacy week was held from October 11-17, 1925. Ruth intended to use this week to honor the hard work and efforts put in by pharmacists for their patients and communities.

This year, we celebrated National Pharmacy Week at TVH with tons of food, fun, and laughter. We recognized the contributions, accomplishments, and unique role that each member of the pharmacy profession plays in our communities and our patients’ lives. Thank you so much to The Valley Health System’s pharmacy team for all that you do!

PHARMACY DISPLAY CASE

By: Likitha Mamillapalli, PharmD

This year, the pharmacy residents designed the display case outside of the Terrace at The Valley Hospital with the theme “Out with the old, in with the new pharmacy!” The idea behind this theme was to compare pharmacy practice in the past versus today and show how the profession has changed throughout the years.

On the “old” side, the residents displayed various items that represent the pharmacy profession from the past. Decorations on this side include The Valley Hospital’s inpatient pharmacy blueprints from the last remodel in the 2000s, as well as some pharmacy antiques such as glass vials, tablet punches, wire-robot pharmacist dispensing medications, and a ceramic drug jar. The goal was to represent the traditional side of pharmacy as a profession dedicated to dispensing medications. Pharmacy has evolved drastically over the years from the original model.

On the “new” side, is a picture of The New Valley Hospital in Paramus, NJ with one of our pharmacists (Sonya Kremenchugsky) pointing to the approximate location of the new inpatient pharmacy. On this side, the intent was to represent the expansion of a pharmacist’s role in healthcare. Since pharmacists have moved from attaining a Bachelor of Science in Pharmacy (BSPharm) to Doctor of Pharmacy (PharmD) degrees, there have been major advancements in this field. Therefore, the speech bubbles on this side are utilized to emphasize a pharmacist’s expertise in drug information and conducting drug use evaluations, participation in community outreach, movement towards a collaborative practice, and involvement in ensuring effective transitions of care. In addition, there is a barcode reader with some unit dosed “medications” as well as some closed-system transfer devices to represent the advancements in technology and medication preparation tools that ensure safe and effective medication delivery to patients.

DRUG INFORMATION CORNER

By: Krissia Melgar, PharmD, BCPS, Andrew J. Lee and Megha Rana, FDU PharmD Candidates 2024

Question: What strategies have been proven to decrease pain associated with intravenous (IV) potassium infusions?

Response: Hypokalemia is a common electrolyte imbalance in hospitalized patients. Common complications of hypokalemia include cardiac arrhythmias, increased risk of stroke, myopathy, hypomagnesemia, and nocturnal leg cramps. Hypokalemia can lead to serious complications and even prove fatal. Depending on the severity of the hypokalemia, IV administration may be required. However, IV administration of potassium chloride (KCl), particularly via peripheral access, can lead to chemical phlebitis, which is a common complication causing pain and discomfort in patients. Given the importance of replenishing potassium, it is essential to be aware of strategies to manage phlebitis during IV administration of KCl.

The *Infusion Therapy Standards of Practice* provides guidance for managing chemical phlebitis and gives the following recommendations:

- *Evaluate if IV infusion therapy is necessary, oral KCl may be acceptable*
- *Consider alternate vascular access, such as a larger vein or a central line*
- Slow the rate of infusion
- Consider a more dilute solution

Several studies explore the use of lidocaine to reduce pain associated with KCl-induced phlebitis. However, currently, there is no conclusive evidence to prove lidocaine's efficacy and safety in reducing the pain associated with potassium chloride infusions. While some of the studies showed a decrease in pain scores, many of the studies published are limited by a small sample size and varying methods to evaluate the efficacy of lidocaine. In addition to these limitations, there are concerns about the safety of this practice.

As of 2024, both lidocaine and KCl have been identified as high-alert medications by the Institution for Safe Medication Practices (ISMP). A report by ISMP analyzed previous medication errors and identified three incidents where lidocaine was used to reduce pain from potassium chloride infusion. One of the incidents involved a nurse who mistakenly used the wrong concentration of lidocaine resulting in the patient receiving an excessive amount of it. Fortunately, the patient had a pacemaker that suppressed any cardiac adverse effects caused by lidocaine toxicity.

A supported strategy to decrease KCl-induced phlebitis is decreasing the rate of the infusion however, a possible limitation of this practice is the need for additional orders to adjust the rate once the infusion has started. At New York-Presbyterian, Hudson Valley Hospital, there is a protocol in place for patients who are given KCl peripherally that involves assessing the patient for pain. If the patient experiences no pain, the rate remains the same. However, if the patient experiences pain, the rate is reduced. If the pain score is 5 or below, the rate is reduced by 25% and if the pain score is above 5, the rate is reduced by 50%. Protocolization of decreasing the rate of KCl infusions may be beneficial to managing phlebitis.

To sum up, while some studies suggest that the use of lidocaine during KCl infusions can enhance patient tolerance, these studies are limited in size and quality. Other ways to reduce the discomfort that comes with KCl infusions include taking oral replacement agents, lowering the concentration of the infusion, administering the infusion at a slower rate, and using a larger vein or central line when appropriate.

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USP 797 UPDATES

By: Phillip Park, PharmD

USP 797 is a guideline that establishes a standard on the procedures for compounding sterile drug preparation developed by a nonprofit scientific organization, the United States Pharmacopeia Convention (USP). This guideline applies to all pharmacies that produce compounded sterile preparations (CSPs), including those in hospitals, retail settings, radio/nuclear pharmacies, and other environments. USP 797 was first implemented on January 1, 2004, and over time, it became a foundation for several regulatory agencies' sterile compounding standards.

On November 1st, 2023, the newly revised USP 797 guidelines for sterile compounding officially went live. Several sections, such as categories and beyond use dating, cleaning, aseptic technique, garbing, and etc. have changed compared to the previous version. We will dive into the revisions pertinent to The Valley Hospital's and Luckow Pavilion Infusion Center's cleanrooms.

Categories and Beyond Use Dating (BUD)

- Category 1 SCA: BUD of 12 hrs at room temperature and 24 hrs if refrigerated.
- Category 2: If only sterile ingredients used, 4 days in room temperature, 10 days refrigerated and 45 days frozen.
- Docking for future activation and administration must be done in ISO 5 hood class environment and BUD must not be longer than those specified in the manufacturer labeling.
- BUD of commercial single-use vial is 12 hours after a puncture.

Aseptic Technique

- Must apply 70% IPA to gloves immediately before entering hands in PEC.
- Must apply 70% IPA to work surface every 30 min (if compound takes 30min or less) or immediately after compounding (if compound takes > 30 min)
- Any item must be wiped (IPA 70%) if going into classified area, pass through or SCA.
- Any item must be wiped with IPA 70% before entering PEC.

Garbing

- Must use low lint garment, shoe covers, head covers, and face masks.
- Must disinfect googles, glasses and respirators with 70% IPA wipes during hand hygiene and garbing procedure.
- Gloves must never be donned in the PEC.
- Alcohol-based hand sanitizer must be used after garbing frock.

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Miscellaneous

- Must assign a designated supervisor.
- Personnel qualification and competency should be completed every 6 months and every 12 months for principles and practices.
- Repackaging is considered compounding

Cleaning

- Must use low-lint wipes, sponges, and mop heads.
- All cleaning products for PEC must be sterile and labeled with an expiration date once opened.
- Cleaning tools are to be cleaned and disinfected prior and after each use and dedicated for use if reusable.
- PEC worktray should be removed and cleaned monthly.
- PEC, equipment in PEC, pass through, floor, and sink should be cleaned daily.

Environment

- Surface sampling must be done at the end of shift before cleaning monthly.
- Pressure must be physically logged once daily.
- Calibration of monitoring devices must be done yearly if not specified by manufacturer.

Immediate Use

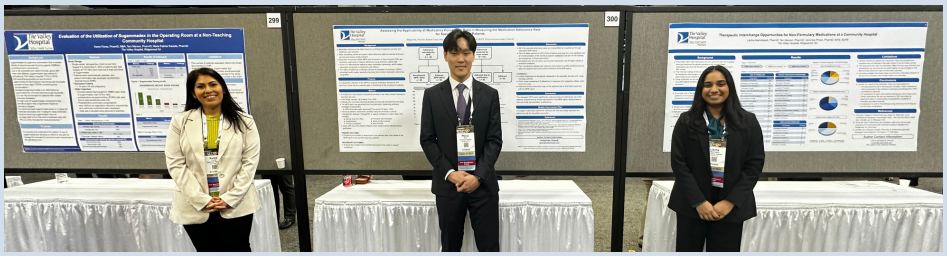
- BUD extended to 4 hours (previously 1 hour). However, TVH policy will remain 1 hour.
- Administration must begin within 4 hours (1 hour) of the start of preparation.
- Must be labeled with name of preparer, name and amounts of each active, and 4 hour period (1 hour) within admin must begin if not directly administered by the preparer
- Compounding record required if immediate use CSP made for more than 1 patient.
- NIOSH Table 1 drugs cannot be immediate use.

Special thank you to Noran Taman, PharmD, BCSCP for updating the sterile compounding policies and procedures for The Valley Hospital and Luckow Pavillion.

PEC, primary engineering control; SCA, secondary compounding area; IPA, isopropyl alcohol; NIOSH, National Institute for Occupational Safety & Health

ASHP MIDYEAR

This past December, the PGY1 pharmacy residents (Karen Flores, Phillip Park, and Likitha Mamillapalli) attended the annual American Society of Health-System Pharmacists (ASHP) Midyear Clinical Meeting and Exhibition in Anaheim, California. During this conference, they networked with over 20,000 pharmacy professionals and students from all around the country, attended numerous continuing education lectures, recruited potential pharmacy residency candidates, and presented their research projects through a poster presentation.



Karen presented her research on the utilization of sugammadex within The Valley Hospital's operating room (OR). This is a high-cost reversal agent for neuromuscular blocking agents such as rocuronium and vecuronium. She evaluated the pattern of use of this medication and through the project was able to develop criteria for use within the OR.

The Valley Hospital
Valley Health System

Evaluation of the Utilization of Sugammadex in the Operating Room at a Non-Teaching Community Hospital

Karen Flores, PharmD, MBA; Terri Marxen, PharmD; Maria Fatima Iharada, PharmD
The Valley Hospital, Ridgewood NJ

Background

- Sugammadex is a gamma cyclodextrin that reverses effects of neuromuscular blocking agents (NMBAs) rocuronium and vecuronium.
- Due to its complete and rapid reversal, along with fewer side effects, sugammadex was added to formulary at The Valley Hospital (TVH) in 2016.
- 2023 anesthesia guidelines recommend sugammadex for all levels of neuromuscular blockade plus train-of-four ratio (TOFR) monitoring and documentation.[3]
- Neostigmine/glycopyrrolate is an alternative to sugammadex for minimal neuromuscular blockade, but is not recommended for patients with certain pulmonary diseases.[2]
- The high cost of sugammadex compared to the alternative agent has a significant impact on pharmacy budgets.
- The recommended sugammadex dose is 2 mg/kg for moderate blockade and 4 mg/kg for deep blockade.[1]
- Patients receiving sugammadex have an average total time in the post-anesthesia care unit (PACU) of 60 minutes for most procedures .[4]

Purpose

- To evaluate and understand the pattern of use of sugammadex and develop a criteria of use plan to manage the reversal of rocuronium and vecuronium in the operating room.

Methods

Study Design

- Single-center, retrospective, chart review from August 6 to September 5, 2023 of patients who had surgery at TVH who have received at least one dose of sugammadex.
- Patients were systematically selected, and patient information was accessed via electronic medical record (EMR).
- **Exclusion Criteria**
  - < 18 years old and pregnancy
- **Data Collection**
  - Included patient demographics, NMBA used, dose of sugammadex, train-of-four ratio, postoperative nausea/vomiting (PONV) risk, and time in post-anesthesia care unit.
  - Postoperative pulmonary complications were defined as respiratory infections, pneumonitis, and pulmonary embolisms were assessed.
  - Data was evaluated using descriptive statistics.

Results

Table 1. Patient demographics (n=44)

Baseline Characteristics	
Average age (years)	58
Female sex (%)	75%
Weight (kg), mean ± SD	79.1 ± 19.1
Pulmonary disease history	16%
Neuromuscular blocking agent(s) received (%)	
Rocuronium only	86%
Vecuronium only	5%
Rocuronium and vecuronium	9%

Results (Continued)

Table 2. Safety (n=44)

Metrics	Findings
PONV Risk	
1	27%
2	52%
3	16%
Not applicable	5%

Metrics	Findings
TOFR documentation	0%
Pulmonary complications	0%

Figure 1. Sugammadex Dosing (n=44)

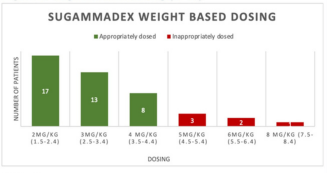


Table 3.

Metrics	Findings Percentage of patients (n=44)
Appropriately dosed	86%
Inappropriately dosed	14%

Table 4. Average PACU Time

Metrics	Findings
All procedures (n=44)	63 minutes
Abdominal/Hernias procedures (n=17)	59 minutes

Limitations

- The number of patients evaluated reflect only those documented in EMR.
- Patients who received sugammadex, but documention occurred in another anesthesiologist record software were not represented in the study.
- Train-of-four ratio was not documented in the chart.

Conclusions

- There is no comparative drug to sugammadex available on the market.
- Sugammadex was used to only reverse rocuronium and vecuronium and the majority of patients received rocuronium.
- Sugammadex appears safe with no pulmonary complications identified.
- The need to apply train-of-four ratio monitoring and documentation at TVH was identified.
- The development of sugammadex dosing guidelines is an area of potential cost savings.
- PACU total average time at TVH is comparable to the average PACU time documented in the literature.

References

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Disclaimer: The opinion and conclusions present herein are those of the authors and do not necessarily represent the views of the institution. The authors have nothing to disclose.

Phillip presented his work on the applicability of the medication possession ratio (MPR) in assessing medication adherence rates for patients at TVH's specialty pharmacy. He utilized this specific tool to measure medication adherence and searched for gaps in its ability to identify at-risk patients for medication non-adherence.

The Valley Hospital
Valley Health System
Pharmacy

Assessing the Applicability of Medication Possession Ratio in Measuring the Medication Adherence Rate for Specialty Pharmacy Patients

Phillip Park, PharmD; Brianne Traub, PharmD, MPA; Raymond Hawash, PharmD, BCPS; Sonya Kremenchugsky, PharmD
The Valley Hospital, Ridgewood, NJ

Background

- Medication adherence has been shown to contribute to treatment success and healthcare cost reduction.
- Many accrediting bodies and payers utilize adherence rates to evaluate pharmacy services and assess reimbursement.
- Medication Possession Ratio (MPR) and Proportion of Days Covered (PDC) are commonly used tools to measure adherence using pharmacy claims data.
- There is no standardized method to report medication adherence, which makes meaningful comparison in adherence rate difficult.
- The Valley Hospital has a Utilization Review Accreditation Commission (URAC) accredited health system specialty pharmacy that monitors medication adherence using MPR.

Purpose

To evaluate the utilization of the MPR to measure medication adherence and determine if there are any potential gaps in identifying at-risk nonadherent patients.

Method

- Retrospective chart review of all patients enrolled in the Valley Health Pharmacy's Specialty Services.
- Time frame: January 1st to March 31st, 2023.
- Patients who voluntarily declined specialty services are excluded from the study.
- The MPR report was generated from the pharmacy's dispensing software, McKesson EnterpriseRx.
  - MPR=[Total day supply dispensed]/[Time period, 90 days] ×100%
- Individual patient's charts were reviewed using the pharmacy's clinical management software, TherigySTM, to capture limitations to claims data. This includes:
  - Sample drug from office
  - Hospitalization
  - Change in treatment
  - Premature discontinuation
  - Newly enrolled patients
  - Early fill dates
- Cases with one of the stated limitations were categorized as adherent due to justification.

PRIMARY OUTCOME:
- Comparing the number of cases found to be adherent after chart review to the MPR report in the specialty pharmacy patients.

SECONDARY OUTCOMES:
- Evaluate the number of documented interventions that justify or support adherence.

Results

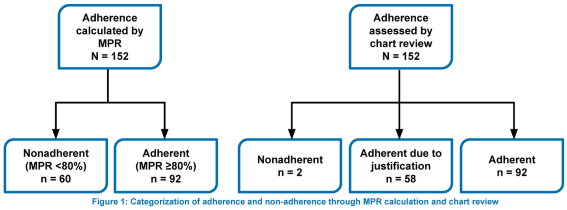

Figure 1: Categorization of adherence and non-adherence through MPR calculation and chart review

Primary Outcome

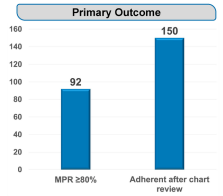

Figure 2: Number of adherent cases through MPR calculation versus chart review

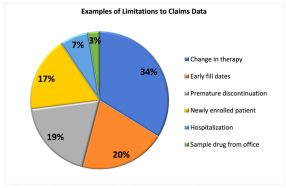

Figure 3: Breakdown of limitations to claims data observed in the Valley Health Pharmacy's specialty services

Secondary Outcome

Number of nonadherent cases	Number of cases with interventions made
2	0

Number of adherent due to justification cases	Number of cases with interventions made
58	31

Discussion

- 58 of the specialty pharmacy cases are misidentified as nonadherent through calculated MPR report.
- Early fill dates account for 20% of the limitations and pose the most significant risk of misinterpretation of the individual patient's adherence rate as it is not routinely documented as a clinical intervention.
- All patients who did not have a documented intervention had fill dates outside of reviewed timeframe.
- Two nonadherent patients had historical interventions to justify nonadherence but were not captured due to the preset timeframe of the MPR report.

Limitations:
- Uneven distribution of therapeutic categories in the specialty services with mostly oncology patients.
- Chart review assessment of adherence is measured with subjective criteria, which is prone to bias.
- Historical clinical intervention may not be captured due to time frame restriction with the MPR report.

Conclusion

The calculated MPR report significantly underestimates the adherence rate of the patients. Supplementing clinical interventions to the MPR report, demonstrates a more accurate representation of adherence.

Quality Improvement Plan

Investigate if alternative adherence methods will more accurately represent the adherence rate for the patient population.

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Authors of this presentation have nothing to disclose. The opinions and other discussions presented herein are those of the authors and do not necessarily represent the views of Valley Health System.

Likitha evaluated inpatient order entries for non-formulary agents and developed a list of the top 50 non-formulary medications utilized at TVH. From the data collected, she categorized these medications based on opportunities to add the medication to the TVH's formulary, create a therapeutic interchange policy, or keep as non-formulary.

The Valley Hospital
Valley Health System
Pharmacy

Therapeutic Interchange Opportunities for Non-Formulary Medications at a Community Hospital

Likitha Mamillapalli, PharmD; Terri Marxen, PharmD; Veronica Prisco, PharmD, MHS, BCPS
The Valley Hospital, Ridgewood, NJ

Background

- Prescribers often order medications that are not found within the hospital's formulary dictionary for patients admitted to the hospital. These medications are input into the electronic medical record as non-formulary (NF) entries.
- The American College of Clinical Pharmacy (ACCP) published guidelines for therapeutic interchange to standardize the practice of therapeutic interchange across institutions.
- These guidelines can be utilized to provide patients with therapeutically equivalent agents available on the hospital's formulary during their admission.

Objective

- To compile a list of the top 50 non-formulary entries to recommend additions to the hospital's formulary or changes to the current automatic therapeutic substitution policy.

Methods

- Single-center, retrospective evaluation of non-formulary medication entries at a 451-bed community hospital.
- **Inclusion criteria:** non-formulary medication entries between September 1, 2022 to August 31, 2023 obtained from the electronic medical record.
- **Exclusion criteria**:
  - Orders for medications on the hospital's formulary
  - Orders missing the drug's name or strength
  - Orders for over-the-counter supplements or anti-epileptic drugs
- **Data collection:**
  - Name of non-formulary medication
  - Medication strength
  - Total number of entries
  - Medical category
  - Therapeutic drug class
- **Primary outcome:** list of the top 50 most ordered non-formulary medications organized by medical category and therapeutic drug class to evaluate for the appropriateness of therapeutically substituting to a formulary equivalent agent or the need to add to the hospital's formulary

Results

Figure 1: Enrollment

Tables 1-3: Top 50 NF Entries Based on Recommendation

ADD TO FORMULARY

Drug Name	# Entries
Cyclosporine [Restasis]	293
Mirabegron ER [Myrbetriq]	263
Icosapent Ethyl [Vascepa]	123
Linaclotide [Linzess]	106
Omega-3 Acid Ethyl Esters [Lovaza]	80
Febuxostat [Uloric]	64
Brimonidine/Timolol [Combigan]	71
Desvenlafaxine [Pristiq]	48
Formoterol [Perforomist]	40
Lurasidone [Latuda]	21
Fesoterodine [Toviaz]	20
Fosfomycin [Monurol]	20
Ivabradine [Corlanor]	20
Lubiprostone [Amitiza]	19
Vortioxetine [Trintellix]	18
Brinzolamide/Brimonidine [Simbrinza]	15
Brinzolamide [Azopt]	14
Vilazodone [Viibryd]	12
Tadalafil [Adcirca]	12
Carbidopa/Levodopa ER [Rytary]	12
Dulaglutide [Trulicity]	11
Estradiol [Estrace]	11
Tacrolimus [Envarsus, Prograf]	9
Budesonide [Pulmicort]	9
Olopatadine [Pataday]	9
Atomoxetine [Strattera]	9

CREATE THERAPEUTIC INTERCHANGE

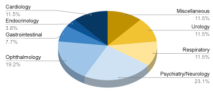
Drug Name	# Entries
Bimatoprost [Lumigan]	131
Telmisartan [Micardis]	116
Mesalamine [Apriso, Lialda]	82
Linagliptin [Tradjenta]	68
Pitavastatin [Livalo]	65
Travoprost [Travatan Z]	41
Insulin Degludec [Tresiba]	33
Lovastatin [Mevacor]	31
Brimonidine [Alphagan]	23
Azilsartan [Edarbi]	22
Fenofibrate [Tricor]	21
Alogliptin [Nesina]	15
Pancreatic Enzymes [Creon, Zenpep]	13
Sitagliptin/Metformin [Janumet]	11
Saxagliptin [Onglyza]	7
Vibegron [Gemtesa]	4

KEEP AS NON-FORMULARY

Drug Name	# Entries
Droxidopa [Northera]	8
Colesevelam [Welchol]	7
Anastrozole [Arimidex]	6
Donepezil [Aricept]	6
Cabergoline [Dostinex]	6
Tetrabenazine [Xenazine]	5
Guanfacine [Intuniv]	4
Bromfenac [Prolensa]	4

Figures 2-4: Medical Categories of Top 50 NF Entries

ADD TO FORMULARY (N=25)



CREATE THERAPEUTIC INTERCHANGE (N=17)

KEEP AS NON-FORMULARY (N=8)

Limitations

- Orders entered as "patient own medication" were not evaluated and therefore are not reflected in the total number of non-formulary entries.
- The drug dictionary seen by prescribers differs from the drug dictionary that pharmacists can see and use, so certain agents can be changed to look like formulary items and may not have been captured.
- Formulary updates have been made since the time of the data collection to the time this evaluation was formally written and submitted.

Conclusions

- Overall, as a result of this evaluation, there are opportunities for:
  - 25 medications to add to the hospital's formulary. These medications will be presented to the institution's pharmacy and therapeutics (P&T) committee for approval.
  - 17 medications to add to the hospital's therapeutic interchange policy. These medications will also be presented to P&T committee for approval to allow for pharmacists to automatically substitute to formulary equivalent products.
  - 8 medications to add to the pharmacy's drug dictionary but to keep as non-formulary medications.

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The authors have nothing to disclose.

MEET OUR NEW PGY1 PHARMACY RESIDENCY PROGRAM COORDINATORS, FDU FACULTY, AND PGY1 PHARMACY RESIDENTS

SONYA KREMEMCHUGSKY, PHARMD

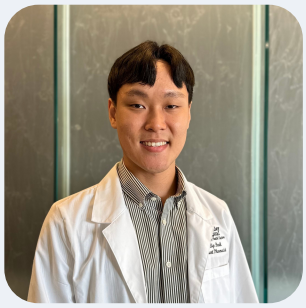
PGY1 Community-Based Pharmacy Residency Program Coordinator

Sonya received her Doctor of Pharmacy degree at The University of Connecticut. She started at The Valley Hospital in 2019 as a Resident Pharmacist in the PGY1 Traditional Pharmacy Residency Program. During her residency, Sonya discovered her area of interest in oncology. After residency, Sonya worked at the Ambulatory Infusion Center. Sonya is currently working at the Specialty Pharmacy as a Clinical Pharmacy Specialist. She is excited to step into her role as the PGY1 Community-Based Pharmacy Residency Program Coordinator where she can integrate new pharmacy residents and students as valued members of the healthcare team. Aside from her love for the profession of pharmacy, Sonya enjoys taking group fitness classes, traveling, and spending time with her family and friends.

KRISSIA MELGAR, PHARMD, BCPS

PGY1 Traditional Pharmacy Residency Program Co-Coordinator and Acute Care Clinical Assistant Professor at Farleigh Dickinson Univeristy

Krissia earned her Bachelor of Arts in Biochemistry from Drew University and her Doctor of Pharmacy degree from Temple University. She completed a PGY-1 residency in Pharmacy Practice at VA Caribbean Healthcare System in San Juan, Puerto Rico. She began her career at Urban Health Plan as a clinical pharmacy specialist in ambulatory care, providing care to underserved populations in New York City. One of her responsibilities was the implementation and management of the medication-assisted treatment program for patients with opioid use disorder. Afterward, Krissia worked as the clinical pharmacy specialist in internal medicine at Holy Name Medical Center. In this role, she provided care to acute and critical care patients and acted as the co-chair of the anticoagulation subcommittee. Krissia joined the FDU School of Pharmacy and Health Sciences in November 2023. She is currently serving as a preceptor for APPE students and residents at The Valley Hospital. Her clinical interests include substance use disorders and anticoagulation. Krissia is fluent in Spanish and enjoys baking. In her free time, she loves exploring new parks and zoos with her one-year-old daughter.



PHILLIP PARK, PHARMD

PGY1 Community-Based Pharmacy Resident

Phillip Park is from South Korea and earned a Doctor of Pharmacy degree from Rutgers University in May 2023. Phillip is passionate about new experiences in outpatient clinical pharmacy settings offered by the Valley Health System. Phillip decided to pursue a residency when his previous work experience at a specialty pharmacy sparked his passion for clinical outpatient management. His clinical area of interests include specialty pharmacy and ambulatory care. Phillip believes that residency training will furnish knowledge and skills to provide patient-centered care in outpatient settings in collaboration with the providers. Phillip enjoys traveling, cooking, and watching movies with family and friends outside the pharmacy. A fun fact about Phillip is that he was born in Rochester, Minnesota, but shortly moved back to South Korea and lived his entire life in South Korea before moving back to the US in 2017 for pharmacy school.

LIKITHA MAMILLAPALLI, PHARMD

PGY1 Traditional Pharmacy Resident

Likitha was raised in Lake Hiawatha, New Jersey and earned a Doctor of Pharmacy degree from the Ernest Mario School of Pharmacy at Rutgers University in May 2023. She is passionate about improving health literacy and advocating for patient autonomy and medication safety in order to optimize patient care. Her current areas of interest include medication safety, oncology, and investigational drugs. She is honored to be a part of The Valley Hospital where she can train to be a more confident and independent pharmacist. Outside of pharmacy, Likitha enjoys baking, hiking through National Parks, and exploring new cafes and restaurants. A fun fact about Likitha is that she loves reviewing restaurants and has been a part of the Yelp Elite Squad for four years.

KAREN FLORES, PHARMD, MBA

PGY1 Traditional Pharmacy Resident

Karen grew up in Florida and moved to New Jersey in 2013. She earned a Doctor of Pharmacy from Fairleigh Dickinson University and Health Sciences in May 2023, along with a Master in Business Administration. Karen is very excited to join The Valley Hospital team. She is enthusiastic to apply her knowledge, work with a multidisciplinary team, and advocate for her patients. Her current areas of interest include oncology, medication safety, hospital administration, and teaching. Outside of pharmacy, Karen enjoys using her Peloton bike, binge-watching Netflix, and spending time with family and friends. A fun fact about Karen is that she has taken kickboxing as a new hobby.

FORMULARY UPDATES CONTINUED

Olanzapine intramuscular [Zyprexa IM] is a second-generation thienobenzodiazepine antipsychotic that displays potent antagonism of serotonin 5-HT2A and 5-HT2C, dopamine D1-4, histamine H1, and alpha1-adrenergic receptors. It is used as a short-acting intramuscular injection to treat acute agitation/aggression associated with psychiatric disorders. Common adverse effects include orthostatic hypotension, sedation, constipation, and dose-dependent asthenia.

Cyclosporine [Restasis] is a calcineurin inhibitor that is indicated for dry eye disease to increase tear production when suppressed tear production is presumed to be due to keratoconjunctivitis sicca-associated ocular inflammation (in patients not already using topical anti-inflammatory drugs or punctal plugs). Common adverse effects include burning sensation of the eyes or eye pain.

Brinzolamide [Azopt] is a carbonic anhydrase inhibitor that decreases aqueous humor secretion and ultimately reduces intraocular pressure. It is used in the treatment of elevated intraocular pressure (IOP) in patients with ocular hypertension or open-angle glaucoma. Common adverse effects include blepharitis, blurred vision, dry eye syndrome, eye discharge, eye discomfort, etc.

Brinzolamide/Brimonidine [Simbrinza] is a combination of a alpha-2 agonist and carbonic anhydrase inhibitor that causes reduction of aqueous humor formation and increased uveoscleral outflow as well as decreased aqueous humor secretion that results in a reduction of IOP. It is also used to decrease IOP in patients with ocular hypertension or open-angle glaucoma. Adverse effects include blurred vision, eye irritation, dysgeusia, and xerostomia.

Olopatadine [Pataday] is a second-generation selective histamine-1 antagonist that inhibits the release of histamine from mast cells and histamine-induced effects on conjunctival epithelial cells. It is used to treat ocular itching associated with allergic conjunctivitis or for the temporary relief of itching and redness of the eyes caused by grass, ragweed, pollen, and animal dander and hair. Associated adverse effects include abnormal sensation in eyes, blurred vision, dry eye syndrome, etc.

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