NYSCHP | New York State Council of Health-system Pharmacists

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NYSCHP 2020 President Installation Address

We are Essential…We are Indispensable

Good evening my esteemed pharmacy colleagues. Thank you so much to everyone for your participation in the first ever NYSCHP virtual HOD. Without all of YOU, this would not have been possible. Special thanks to Liz Shlom, Tom Lombardi, Shaun Flynn and Rebecca Harrington for their work in making this possible.

Thank you for choosing me to be your President. When I assumed the role of President Elect last April, never could I have imagined that I would be here today, speaking to you virtually, in the midst of a pandemic. It is with honor and pride that I speak with you today as your President. I must say that I am excited to lead this outstanding organization and am humbled by the great leaders who have served before me.

I cannot express to you how proud I am of our profession and of the exemplary work that has been done by every member of our teams. I know that at this time, each of us is experiencing the anxiety, the stress, the nervousness, the constant state of urgency, the exhaustion, and the reality of life and death. Throughout the pandemic, we have stayed strong. We have supported our colleagues – nurses, physicians, APPs, respiratory therapists – and we have supported each other. And yes….I'm sure we have all cried together…tears of sadness and tears of triumph.

Drug shortages, sleepless nights worrying about how much fentanyl we have, how much hydromorphone, ketamine, midazolam, propofol and dexmedetomidine we have and what about cisatracurium and rocuronium. Staff coming in early, staying late, working double shifts and off-shifts to assure we have ample supply of compounded drug available; a drip can't run dry. Technicians doing constant deliveries to COVID floors, leaving one less thing for the nurse to worry about. How many "NEW" ICUs can we have? Pyxis stock, non-pyxis stock – we must assure that necessary medications are easily available. We must educate our staff on all changes. Hydroxychloroquine, do we use it? With or without azithromycin? Tocilizumab – to use or not to use - 400 mg, 600 mg or 800 mg? Anticoagulant protocols, steroid recommendations, IRB protocols and clinical trials. We are in uncharted territory. Yet, we, the drug experts, persevere, and are at the forefront doing what we do best – evaluating data, developing treatment guidelines, and educating practitioners at the bedside.

We have demonstrated that our profession is ESSENTIAL, that we are INDISPENSABLE. We are frontline team members who assure that our patients receive the highest quality of care. I think of the patient as our North Star. What does that mean exactly? It comes from the North Star (Polaris), in the sky that you can follow when lost. You can reorient yourself just by looking up. We can always ensure that we are tracking in the right direction by re-orienting ourselves. Always look to the patient; focus on the North Star. It is our patients who drive our performance every day. We are advocates for these patients who cannot always advocate for themselves.

In tandem with advocacy for our patients, we must advocate for the pharmacy profession. I am proud of NYSCHP and the work that was done by many, advocating for our profession, responding to the Governor's Executive Orders, working with the Board of Pharmacy, networking with members, providing opportunity for roundtable discussions and sharing of information and knowledge.

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What is the way forward? We must prepare and adapt to a "new normal", whatever that may be. Cancellation of the Annual Assembly was a great loss professionally, financially and personally. The Council is facing the most challenging period in our history. Rest assured that much work has been happening behind the scenes to safeguard the stability of the organization. In line with the organization's Strategic Plan, a Governance Focus Group has been developed to objectively evaluate and optimize the structure, function and efficiency of the organization and to make recommendations for change to the Strategic Planning Committee and the Board of Directors. The BOD will work tirelessly to ensure that our goals and objectives are met. But….we need each of you now more than ever. What can you do? Recruit a member, serve on a committee, attend a legislative visit, or volunteer as a speaker. The Council is great because our members do great things. Our future will be determined by what each one of us does over the next year.

As we embark on the year ahead, I think of what we have experienced throughout this pandemic. This further solidifies my vision for the future.

- We will grow and expand our advocacy efforts. We must promote our profession to the public, to our legislature and to other organizations. We must advocate for enhanced practice opportunities and move our profession forward. There is no time like the present to highlight the role of the pharmacist on the healthcare team. Thanks to the incredible work spearheaded by Karen Berger and Andrew Kaplan, we are in a good position to do so. Great strides in advocacy have been made. Seven of nine chapters have local Grassroots Advocacy Committees. More than seventy legislative visits have been conducted since creation of the statewide Grassroots Advocacy Committee. I would like to see ALL chapters have committees. Planning is underway for the inaugural NYSCHP Advocacy Week in 2021. We cannot do it without you – our members. We need you to get up and get out; engage friends, colleagues, students and technicians. We can accomplish more together.

- Healthcare is a team sport and collaboration among healthcare professionals is important in optimizing patient outcomes. As an organization, our educational programming offered to members is innovative and outstanding. It is also "siloed". We need to share this information with others; we need to learn from one another in a multidisciplinary manner and we need to learn with one another. Joint learning promotes an appreciation for the contributions of various disciplines in the healthcare continuum.

- We will lead the effort on technician training following implementation of our new technician legislation. We will provide our members with resources and/or toolkits to support key components of their practice, including technician training, new roles, and pharmacy models. Many of our members across the state are doing outstanding work. We can learn from one another, network, and share information.

In closing, let me read to you our organization's mission statement: "Our Mission is to represent our members and advance pharmacy as an essential component of healthcare." It has never been more clear; we have undoubtedly demonstrated ourselves to be ESSENTIAL! We managed the pandemic on the front lines, we performed, and we proved ourselves to be an ESSENTIAL component of our healthcare teams. I'm so proud of you, so proud of us, and proud to be a part of NYSCHP. Let's continue to focus on our North Star and we will continue to achieve our goals and move our profession forward.

I'd like to thank a few folks who have been on this journey with me through LISHP and NYSCHP:

- Rob Berger, from the day I met you I knew we would be in this together; thank you for your friendship and support.

- Kathy Minlionica, thank you for never letting me say no, for encouraging me to accept new challenges.

- Leigh Briscoe-Dwyer, when I was installed as LISHP president, you told me I would be President of NYSCHP one day; thank you for your unending support.

- Liz Shlom and Joe Pinto – my EPD Director predecessors – thank you for your mentorship and support.

- Past NYSCHP Presidents – you have been a constant source of support and mentorship. I am humbled to follow in your footsteps.

- My many NYSCHP friends who have been with me throughout this journey: Andrew Kaplan, Liz Cobb, Angela Cheng, Grace Shyh, and Jamie Chin to name a few.

- Shaun Flynn, who always works in the best interest of this organization and is always available the BOD, chapter leadership, and NYSCHP members.

- Rebecca Harrington, thank you for everything you do for this organization.

- My Good Samaritan Hospital Medical Center team led by James Alfiero; they have been a constant source of support and encouragement.

- Karen Berger…You never cease to amaze me. You never accept the status quo. You persevere and strive to implement change. Above all, I am blessed to have you in my life, and am blessed to have a lifelong friend in you.

- And lastly, my mom – my rock, my friend, my biggest advocate through sad times, trying times and happy times in life.

HOD Press Release 2020

NYSCHP Announces Actions Taken at the 2020 House of Delegates

ALBANY NY- The House of Delegates of the New York State Council of Health-system Pharmacists held their 47th annual meeting as a virtual event divided between two online sessions, on May 5 and 19, 2020. Approximately 75 delegates representing nine chapters from New York State were present in the first session and 77 delegates were present in the second session. Each session was also attended by the NYSCHP Board of Directors, many Past Presidents, and a student delegate. At the meetings, the following items were reviewed and approved:

- Amendments to the NYSCHP Constitution and Bylaws
- Two policy resolutions submitted by chapters and committees
- End-of-the-year reports from members of the NYSCHP Board of Directors

Noteworthy amendments to the NYSCHP Constitution and Bylaws included the addition of two pharmacy technician delegates as voting members of the House of Delegates beginning in 2021; and changes that shifted the dues setting authority from the House of Delegates to the NYSCHP Board of Directors.

After discussion and amendments, two policy resolutions were adopted as new Position Statements of the NYSCHP:

- The New York State Council of Health-system Pharmacists supports the development of programs intended at recognition, treatment, and prevention of burnout. In addition, encourage more education on stress, burnout, and overall well-being.
- The New York State Council of Health-system Pharmacists encourages pharmacist education and training in the field of clinical pharmacogenomics and supports involvement of pharmacists in the implementation and application of pharmacogenomics practices within their institutions.

The virtual meeting also included the announcement of NYSCHP awards, incoming Presidents of each of the nine chapters, and the installation of NYSCHP board members. The meeting of the NYSCHP House of Delegates concluded after the submission of recommendations by delegates for action to be taken in the coming year and an address by the incoming President, Ms. Heide Christensen. The House of Delegates was chaired by Elizabeth Shlom, with Shaun Flynn as the Executive Secretary and Thomas Lombardi as Parliamentarian. The updated list of all NYSCHP Position Statements can be found on the NYSCHP website at https://www.nyschp.org/position-statements.

Founded in 1958, the New York State Council of Health-system Pharmacists is a professional organization of over 2000 pharmacists, pharmacy technical personnel, students, industry personnel and other interested in the advancement of pharmacy as an essential component of health care and medication error reduction. NYSCHP is dedicated to promoting good health through public education, fostering safe and rational drug use; encouraging and assisting in the development of quality, comprehensive pharmaceutical services and serving as a catalyst for practice innovation that enables members to better serve the public interest and the profession.

Liz Shlom, PharmD, MBA, BCPS
Chair, House of Delegates

Grassroots Advocacy During COVID-19

The NYSCHP Grassroots Advocacy Committee was created in August 2018 with the primary goal of increasing legislative outreach by facilitating local legislative visits. During the COVID-19 pandemic, the Committee needed to adapt and members were encouraged to shift their approach to scheduling visits. The Westchester and Royals Chapters successfully conducted virtual legislative visits, which are highlighted below. These meetings demonstrate the commitment of our grassroots members; by getting creative during a pandemic, we were still able to hold legislative visits. Kudos to everyone who was able to participate!

Grace Shyh, PharmD, Westchester Chapter President
Christine Kopec, PharmD, Westchester Chapter GAC Chair
Samantha Paone, PharmD, Royals Chapter GAC Co-Chair
Anthony Gerber, PharmD, Royals Chapter GAC Co-Chair
Karen Berger, PharmD, NYSCHP GAC Chair
Andrew Kaplan, PharmD, NYSCHP Vice President of Public Policy

Westchester Chapter Meeting, 5/14/2020

With the rampage of COVID-19 throughout New York, we have brainstormed innovative ways to continue our passion and effort for grassroots advocacy. Through communication and collaboration with our local legislator's office, the WCSHP was fortunate to meet with Senator Shelley Mayer and her chief staff Andy Buder in a virtual meeting. Unlike the traditional in-person meeting where body language and handshakes serve as the best medium to buffer the initial silence and bring everyone closer, in this new era teeming with virtual meeting platforms, we began our virtual meeting by introducing an ice breaker activity to lighten up the ambiance and get acquainted with the Senator. Led by Dr. Ruth Cassidy, we delved into the expansion of pharmacist immunization bill to advocate how expanding the pharmacist's ability to immunize all CDC- recommended vaccines would best serve the public by enhancing public health access, alleviating the primary care clinics' burden, as well as mitigating an individual's nuances of going to the doctor's office. We also advocated for the Collaborative Drug Therapy Management (CDTM) bill with first-hand experiences from the Bronx Care ambulatory care group by Drs. Amanda Phoenix, Charnicia Huggins, Kelly Kang and their PGY2 resident Arsa Shehu-Gega. Dr. Huggins presented data on how clinics associated with pharmacists practicing under CDTM significantly reduced hospital readmissions from chronic diseases like heart failure and hypertension, which optimized patient care outcomes and substantially saved healthcare expenditures. We have been very honored to have Senator Mayer support our causes and provide us with more avenues to advocate for our profession.

Royals Chapter Meetings, 3/17/2020, 4/3/2020, 5/22/2020

As a newly formed chapter of the NYSCHP Grassroots team, Royal Counties set a goal to create a significant impression within our community. The formation of a pharmacy advocacy group was unique to our Royal Counties chapter, making this task even more challenging when we took the position to spearhead this team this January. During the initial steps of founding our chapter we did not anticipate the level of pride and joy we would feel after each legislative meeting. We took the opportunity to not only share important information regarding the status and changes of our pharmacy bills we would like to see, but to also express our everyday experiences with patients and what it means to be a pharmacist in New York City. The impact was really felt when the Assembly Members and Senators truly engaged us and asked questions to expand their view on the world of pharmacy. Our confidence developed with each meeting advocating for the importance of CDTM and expansion of immunization privileges. In only two months we were able to set up four visits with politicians throughout the Brooklyn area. Yet the momentum we shared unfortunately came to a halt when the COVID-19 pandemic began. At this time, we had to readjust our plan and discover new means of ensuring our issues are heard.

Zoom video conference has become an important means for conducting meetings without having to leave the safety of one's home or office. With Zoom meetings swiftly integrating into many professional environments, it soon became clear to us that we had to take advantage of this to continue our pharmacy advocacy efforts. As a result, throughout these last two months our chapter was able to formally speak with the teams of Assembly member Jo Anne Simon and Senator Brian Kavanagh. These conferences felt just as personable and enthusiastic as our face-to-face meetings. Jessie Losch, the community liaison for Assembly member Simon, was particularly excited to speak with us through Zoom. During these calls some of our members, including Dr. Rachel Quinn and Dr. Taryn Mondiello, were able to share their stories about working with a CDTM agreement at the Brooklyn Hospital Center and the positive impact they have seen with patients in their community. Dr. Taryn Mondiello was also able to discuss her difficult experience trying to get a vaccination from her doctor's office only because her local pharmacist was not authorized to administer it under our current NYS immunization law. Each story sparked new conversations and brought about critical questions regarding pharmacists limited scope of practice. As we don't know what will happen in the future with the COVID-19 pandemic, it is important for us now more than ever to continue to advocate for our profession, and we must take advantage of new means of communication to do so effectively.

From left to right: Amanda Phoenix, PharmD; Grace Shyh, PharmD; Christin Kopec, RPh; Donna Moretto, RPh; Ruth Cassidy, PharmD, MBA; Karen Falk, RPh, MBA; Senator Shelley Mayer, JD; Senator's chief staff Andy Buder; Kelly Kang, PharmD; Arsa Shehu-Gega, PharmD; Charnicia Huggins, PharmD, MS; Doreen Chiu, PharmD.

Senator Shelly Mayer, JD

From left to right: Samantha Paone, PharmD; Anthony Gerber, PharmD; Jessie Losch, community liaison to Assembly Member Jo anne Simon

Congratulations!

Dr. Karen Berger

NYSCHP would like to congratulate Karen Berger, PharmD, FASHP, FCCM, BCPS, BCCCP, Neurocritical Care Clinical Pharmacy Manager, NewYork-Presbyterian Hospital/Weill Cornell Medical Center, for being named Fellow of the American Society of Health-system Pharmacists (FASHP).

Dr. Karen Berger received her doctor of pharmacy from the University of Florida and went on to complete her PGY1 pharmacy residency at Yale-New Haven Hospital and her PGY2 critical care residency at the University of Illinois Medical Center at Chicago, where she acted as chief resident. Karen has served on the ASHP New Practitioner's Forum Science and Research Advisory Group, New Practitioner's Forum Executive Committee, Council on Therapeutics, and Vice Chair of the Section of Clinical Specialists and Scientists Yearlong Educational Steering Committee. Within New York state, she served as Chair of the NYSCHP Education and Professional Development (EPD) Committee for four years and then as the Director of Education and Professional Development on the NYSCHP Board of Directors. In her role on the EPD, she developed the inaugural NYSCHP Student Clinical Competition in 2018, implemented monthly webinars averaging almost 100 attendees per month, and served as the Program Chair and moderator for the Critical Care and Infectious Diseases webinar series. Dr. Berger is also a Past President of the NYC Chapter; during her term she created the NYC Grassroots Advocacy Committee in 2017 which was later expanded to a statewide (NYSCHP) committee in 2018. Dr. Berger currently serves as the Director-at-Large Elect for the ASHP Section of Clinical Scientists and Specialists Executive Committee, Member-at-Large for the Society of Critical Care Medicine Clinical Pharmacy and Pharmacology Section, member of the Neurocritical Care Society Pharmacy Leadership Committee, and Chair of the NYSCHP Grassroots Advocacy Committee. Dr. Berger has provided more than 50 professional presentations at local, state, national, and international meetings and has authored >20 publications, including 6 book chapters. In 2019, Karen became a Fellow of the Society of Critical Care Medicine (FCCM).

Dr. Berger has spent the past few months taking care of COVID-19 patients in NYC and developing guidelines to optimize their management. She has participated in COVID-19 podcasts and webinars for ASHP, SIDP, and NYSCHP. When the COVID-19 pandemic hit NYC, there was so little data to guide treatment; institutions all over the country were creating guidelines and protocols which rapidly changed with increasing institutional experience. This pandemic truly solidified the importance of having a diverse professional network. Dr. Berger's network allowed her to stay up-to-date on COVID-19 related practices throughout the country and offered her a lifeline when she had questions about various treatment options for her patients. Sharing information with her peers and staying involved in professional organizations allowed Karen to identify best practices to use within her own institution. She would encourage others to stay engaged in the profession; not only does it help with professional growth, publication, national involvement, and achieving fellowship status within an organization, but it truly helps optimize the care you can provide for your patients. Try to connect with one new person at your next virtual meeting- you'll be surprised at the opportunity it can offer you!

Dr. Nicole Acquisto

NYSCHP would like to congratulate Nicole M. Acquisto, Pharm.D., FASHP, FCCP, BCCCP, Emergency Medicine Clinical Pharmacy Specialist, Associate Professor, Department of Emergency Medicine, University of Rochester Medical Center, for being named Fellow of the American Society of Health-system Pharmacists (FASHP).

Dr. Nicole M. Acquisto works as the Emergency Medicine (EM) Clinical Pharmacy Specialist and as an Associate Professor in the Departments of Pharmacy and Emergency Medicine at the University of Rochester Medical Center. She is a leader in EM pharmacy and active at advancing practice at the national level through advocacy, education, and research. For over 10 years, Dr. Acquisto was the PGY2 EM Pharmacy Residency Director or primary preceptor where she developed unique EM learning opportunities for pharmacy trainees, medical residents, advanced practice providers, paramedics, and international pharmacists. She currently mentors a team of EM pharmacists (and many former residents), manages an emergency department (ED) antimicrobial stewardship program, was Chairman of the ED Opioid Task Force, has a leadership role on the enterprise-wide Opioid Task Force, is involved with quality improvement and optimization of patient care activities with the emergency department, prehospital medicine and several subspecialty services, and develops and organizes emergency response team efforts and simulation activities for pharmacists. Dr. Acquisto is active in the American College of Clinical Pharmacy (ACCP) and the American Society of Health-System Pharmacists (ASHP). She is a past-Chair of the ACCP Emergency Medicine Practice and Research Network (EMED PRN) and has been a member of both the ASHP Section of Clinical Specialists and Scientists Advisory Group on Emergency Care and Clinical Leadership. She volunteers as an ASHP residency accreditation site surveyor and was a member of the expert panel for the EM pharmacy practice Board of Pharmacy Specialties petition and the Commission on Credentialing PGY2 EM residency competency areas, goals, and objectives update. Dr. Acquisto has approximately 70 peer-reviewed publications and book chapters and has presented on the national stage nearly 40 times. Her recognitions include the ASHP Pharmacy Residency Excellence New Preceptor Award (2013), two ASHP Best Practices Awards (2008, 2018), the ACCP New Clinical Practitioner Award (2014), two ACCP EMED PRN Outstanding Paper of the Year Awards, (2016, 2019) and the NYS ACCP Researcher of the Year (2011). She is an Editorial Board member for the Journal of the American College of Clinical Pharmacy, a Fellow of ACCP and ASHP, and a Board Certified Critical Care Pharmacist.

Advice from Dr. Acquisto: Early on in your clinical career it is important to say "yes" to a lot of opportunities to build new relationships, networks of colleagues, and ultimately lead to more opportunities. However, it is easy to feel like you do not have direction towards a long term goal. I've used the Fellowship framework to help provide direction to my "yeses", prioritize opportunities, and as a springboard for how to get more involved in national organizations to achieve this long term goal. National organization work itself is very rewarding as you can be involved in a variety of activities that influence individual pharmacist careers and pharmacy practice. These may range from curriculum vitae review/assistance or abstract or meeting programming review to being on an award or grant application panel, developing national guidance on pharmacy services, or petitioning for new specialty recognition. This volunteer work ultimately shapes the future of the pharmacy profession and expands your network of national and international colleagues.

Poster Abstracts

* Denotes Encore Poster

Clinical Pharmacy Services

Initiating culture callback in emergency department by clinical pharmacy services
Clark LM, Farley KM
Samaritan Hospital- Department of Pharmacy, Troy NY 12180

Service: It is standard practice in the Emergency Department (ED) for all positive culture reports to be reviewed daily and make sure appropriate treatment has been rendered. Pharmacy reviews outpatient antibiotics for their appropriateness through further investigation of the prescribed antibiotics susceptibility and known penetration. If deemed inappropriate, a recommendation is provided to the ED physician assistant for therapy intervention and patient follow-up.

Justification/Documentation: With implementation of pharmacy as the lead role, pharmacy will verify the patient was placed on the correct antibiotic based on the results of the culture and sensitivity. Pharmacy will provide the physician assistants with an appropriate antibiotic with proper dose, frequency and duration based on all patient factors. A pharmacy specific clinical intervention will then be input to document pharmacy interventions.

Adaptability: This service can be adapted to fit the needs of any emergency department whose physician assistants could benefit from a collaboration with pharmacy. The assessment of cultures for antibiotic appropriateness is necessary in preventing antibiotic resistance and proper patient treatment.

Significance: With pharmacy assuming the responsibility of assessing positive cultures in the ED, the physician assistants will have more time to see patients. Pharmacy also readily utilizes clinical knowledge and resources due to their specialized training in antibiotics and their mechanisms of action. This will enhance services provided in the ED, reduce the risk of multidrug-resistant organism infections and further strengthen the relationship between pharmacy and other healthcare professionals of the ED.

Enhanced recovery after surgery (ERAS) for colorectal surgery decreases opioid use postoperatively
DeMari, SR , Bulmer K, Farley KM
Samaritan Hospital- Department of Pharmacy, Troy, NY 12180

Service: One of the many benefits of initiating an ERAS protocol for colorectal surgery patients is the decreased use of opioids used to treat acute pain postoperatively. Although this protocol is very involved, the aspect of interest of ERAS for this service is the use of lidocaine and other non-opioid analgesics. This quality initiative service aims to assess how effective ERAS is in reducing patient need for opioids through the use of preemptive and multimodal analgesia with systemic lidocaine and other non-opioid analgesics. A retrospective review of patient charts was approved by the institutional review board.

Justification: Prescription opioids are often used to treat pain, however, the necessity of opioids following colorectal surgery is in question. In addition, patients are sent home on prescription opioids even when not administered postoperatively during hospital stays. Use of the ERAS protocol is justified for these reasons and furthermore this will help mitigate the overprescribing of opioids where they are not always necessary.

Adaptability: The implementation and results of the ERAS protocol has been extensively studied with colorectal patients, therefore allowing it to be available to hospitals everywhere. While the information is readily available, implementation will require buy-in from multiple different departments, including pharmacy. Despite the massive effort it requires to start, the results seen are quite beneficial to patients.

Significance: The use of ERAS is an opportunity to help mitigate the current opioid epidemic that our society faces by utilizing a multimodal analgesic approach. Learning how to successfully treat acute pain postoperatively without use of opioids is a major achievement; one where the inclusion of pharmacy is integral to the success of the program. This success can also extend to pharmacy regarding the unlikely need for prescription opioids upon discharge.

Evaluating appropriate prescribing of fluoroquinolone antibiotics in two acute community care hospitals
LaPlante R, Bennett J, Farley KM
Samaritan Hospital- Department of Pharmacy, Troy, NY 12180

Service/Program: The quality improvement program initiated at Samaritan and Albany Memorial Hospital was to improve fluoroquinolone prescribing through assessing prescribing prior to and following provider education on appropriate prescribing. The program provided clinical decision support system alerts and clinical antibiotic stewardship rounds for fluoroquinolones warnings and risks. The specific goal was to limit fluoroquinolone use in patients with hypertension, age >/=65, vascular disease, or a history of an aortic aneurysm.

Justification/Documentation: Fluoroquinolone antibiotics have fallen out of favor for reasons including antibiotic resistance, tendon rupture, QT prolongation, blood glucose fluctuations, and aortic dissection. With risks surrounding usage, a prospective audit should be completed weighing the risks versus benefits of therapy. Retrospective data was reviewed from January 2019 to June 2019 before the addition of the alert and the review of fluoroquinolones on infectious disease rounds. Following the retrospective data, clinical support was added focusing on appropriate prescribing practices including indications, appropriate patients, and alternative therapies. Data was reviewed from July 2019 to December 2019, after implementation, to see if these supports decreased inappropriate fluoroquinolone prescribing. Data collected and analyzed in both cohorts included days of therapy per 1000 patient days at risk, indication, provider specialty, number of stewardship interventions targeting fluoroquinolones, and their acceptance rate.

Adaptability: These warnings provoked St. Peter's Health Partners IRB to approve clinical pharmacy research for fluoroquinolone usage which could be transitioned to another institutional setting. Through this implementation, the institution will be more appropriately prescribing fluoroquinolones to the patient population studied through clinical pharmacist and provider communication and interventions.

Significance: This program further integrated the institution's infectious disease clinical pharmacist into the stewardship team to advance patient care when prescribing fluoroquinolones. This ensured quality care in specific patient populations. With the addition of the clinical decision support system, the pharmacy department will further reach providers on appropriately prescribing fluoroquinolones.

Evaluating efficacy of fixed dose four-factor prothrombin complex concentrate in emergent vitamin K antagonist associated bleeding.
Melero BL, Farley KM
Samaritan Hospital Department of Pharmacy, Troy, NY 12180

Service: An unfortunate adverse effect of anticoagulation is excessive bleeding. Often, these patients present to the Emergency Department (ED) and require immediate reversal treatment. The standard of reversal for acute major bleeds in the ED is Four-factor Prothrombin Complex Concentrate (4F-PCC). Due to a short-term product release, a shortage of 4F-PCC deterred the use of weight-based dosing and forced the study of fixed 4F-PCC dosing. Samaritan Hospital has initiated a 1,500 IU fixed dose of 4F-PCC protocol, leading to the opportunity to review the efficacy and safety of fixed-dose 4F-PCC compared to weight-based dosing. A retrospective review of medical records to determine if the fixed-dose protocol of 1,500 IU is efficacious in emergent anticoagulation associated bleeding was approved by the Institutional Review Board.

Justification: 4F-PCC has been the treatment option of choice when treating anticoagulant associated bleeding. Due to shortage, it is important to limit the number of units used but maintain the efficacy of bleeding reversal. This quality improvement project evaluated the use of a fixed 1,500 IU dose of 4F-PCC in patients with warfarin associated bleeding over a one-year time frame. The patients' INR pre-4F-PCC and INR post-4F-PCC dose were evaluated for efficacy.

Adaptability: Fixed dosing of 4F-PCC has shown to effectively lower INR in warfarin associated bleeding compared with weight-based dosing. Implementation of a fixed 1,500 IU dose can reduce medication supply use in hospitals and ensure appropriate treatment efficacy. A standardized order of a fixed-dose can be implemented according to a hospital's electronic medical record for providers to initiate.

Significance: This program requires the collaboration of ED providers and clinical pharmacists to ensure patients with warfarin associated bleeding receive effective bleeding reversal when prescribed 4F-PCC. Fixed-dose 4F-PCC has been shown to be effective when compared to weight-based dosing and will help to maintain medication supply.

Pharmacist-led multidisciplinary approach to opioid tapering in a large private rheumatology*
Miller M, Hennig K, Farrell J
Albany College of Pharmacy and Health Sciences

Service/Program: With the evolution of disease modifying anti-rheumatic drugs and targeted medications, the need for opioids in the treatment of rheumatic diseases has significantly decreased. Current guidelines suggest considering opioid tapering in patients with chronic noncancer pain on >/=90 mg morphine equivalent dose daily; however, limited evidence-based guidelines on opioid tapering exist. The program aims to 1) identify provider perspective and baseline knowledge on opioid tapering, 2) provide education and support to practice-wide procedures and protocols related to chronic opioid therapy and opioid tapering, and 3) provide evidence of improved patient outcomes when a pharmacist is part of the multidisciplinary team in a rheumatology practice.

Justification/Documentation: A baseline survey was administered to rheumatologists in a private practice to characterize current practices and perspectives including the number of patients on opioids, barriers to opioid tapering, level of comfort in management of opioids or opioid tapering, current practices for assessment of pain or risks associated with opioid therapy, and level of interest in education on opioid tapering.

Adaptability: All providers (n=10) reported having patients on chronic opioids and 70% of providers felt they had one or more patients that would benefit from opioid tapering. The reported barriers to opioid tapering included time, comfort, and lack of confidence in managing withdrawal symptoms. Eighty percent of providers rated their comfort level a 5 or lower in tapering or discontinuing an opioid, on a scale of zero to ten, with zero being not comfortable at all and ten being very comfortable. Most providers (n=9) stated they were hesitant or very hesitant in developing an opioid tapering plan.

Significance: Despite the small sample size of this survey, the results show there is an opportunity for pharmacists to play an essential role as part of a team-based approach to opioid tapering or discontinuation.

Evaluating the use of IV lidocaine for renal colic in the emergency department (ED)
Reynolds IE, Farley KM
Samaritan Hospital Department of Pharmacy, Troy, NY 12180

Service: Managing pain in the emergency setting has become more complex given we are in the midst of an opioid crisis. Overuse of opioids has led to dependence and death rates that continue to rise. Trinity Health has adopted the Alternatives to Opioid Use in Emergency Care (ALTO) guidelines to treat common causes of ED visits using non-opioid options. The ALTO pathway for renal colic includes using lidocaine, ketorolac, IV fluids and/or acetaminophen as first line treatment. A retrospective review of patient charts was approved by the institutional review board.

Justification: The ED is the frontline in decreasing opioid dependence. It is important to assess new initiatives for adherence and effectiveness after implementation. This quality improvement project reviewed IV lidocaine orders for patients with renal colic over a one-year period. ED clinical pharmacy services evaluated if the ALTO pathway was followed and whether patients received opioids either in conjunction with IV lidocaine or as rescue analgesia. Concomitant use of acetaminophen, ketorolac and IV fluids was also assessed to determine complete pathway use.

Adaptability: Use of the ALTO guidelines can easily be adopted and implemented in any ED. Decreasing the use of opioids for acute pain has become an important initiative in emergency departments across the country. All medications are easily available and already utilized by most providers. Depending on each site's electronic health record, this pathway can be set up for providers to order.

Significance: Assessment of the efficacy and appropriateness of medication pathways instituted through the collaboration of pharmacy and the ED will help to advance clinical pharmacy practice and improve patient care. Providers will be held accountable to their department's goals through assessment of adherence to protocols. Reviewing pathway usage will allow providers to decrease opioid use and access. Evaluation of pathway utilization is necessary to ensure the best patient outcomes.

Original Research

Improving the process to timely administration of inpatient chemotherapy
Chin J, Asuncion A
NYU Winthrop Hospital

Background: A new NYU Winthrop Hospital's inpatient hematology-oncology team, assembled in September 2017, cares for patients with cancer consisting of oncology providers, pharmacists, and nurses. Intended goals include improving patient care, performing quality improvement projects, and reporting to medication safety meetings. The team found a median time of 10 hours from a patient's admission to chemotherapy administration. This quality improvement was performed to eliminate waste and improve patient care and satisfaction.

Objective: To reduce the time from admission to chemotherapy administration by 25% within 10 months.

Methods: This project was approved by the institutional review board. The inpatient hematology-oncology team developed a process map to identify areas of delays and identify key roles outside of the service to create interventions for the plan-do-study-act (PDSA) cycles. Key roles included provider ordering, admitting/bed board, and nursing assistants. After the first 3 PDSA cycles, a survey was conducted to develop an optimized flow providing time goals for each step of the value stream map.

Results: The retrospective baseline data showed 10 hours from admission to chemotherapy administration. The first intervention engaged bed-board in our weekly emails indicating planned admissions. Bed-board would respond if necessary paperwork was missing. The pharmacist educated attending physicians and fellows about the requirements to order inpatient chemotherapy. The median time to chemotherapy was reduced to 5.5 hours. In the second intervention, the pharmacist collaborated with admitting residents about required admitting orders. In the third intervention, the pharmacist educated nursing assistants to submit heights/weights within 30 minutes of patient arrival for chemotherapy orders. These interventions sustained the time to chemotherapy at 5.5 hours.

Conclusions: interdisciplinary team collaboration led to the successes. A process map highlighted key steps and identified personnel. Time goals achieve and sustained a 55% reduction in time to chemotherapy administration (from 10 hours) to optimized communication and improve patient care/satisfaction.

Development of a novel educational tool to promote antimicrobial stewardship on a college campus*
Acosta C, Ni G, Lee Y, Bradley N
St. John's University (Jamaica, NY)

Introduction: Antibiotic resistance persists as a growing threat to public health. A previous survey conducted at St. John's University revealed a knowledge deficit and inappropriate perception of proper antibiotic use among college students.

Objective: The objective of this study is to develop a novel peer educational tool to promote antimicrobial stewardship among college students.

Methods: A taskforce, consisting of two infectious diseases faculty members and two pharmacy students, established teaching objectives and developed an educational tool and protocol to teach antimicrobial stewardship at a university wellness fair. IRB approval was granted. APPE students served as peer educators. A training session explained the goals of the tool and protocol. Peer educators completed an anonymous survey to assess their experience. Four questions utilized a 5-point Likert scale. The fifth question was open-ended. Collected data was analyzed using descriptive statistics.

Results: An origami fortune teller was created as the tool to facilitate peer-to-peer education. Baseline comfort levels for the peer educators were 3.25/5, on a Likert scale with 1=not comfortable and 5=very comfortable. After training, this average increased to 5/5. The peer educators viewed training as 5/5, with 1=not adequate and 5=very adequate. Peer educators found the tool's ease of use to be 4.5/5, with 1=not easy and 5=very easy. When asked about the tool's reception by participants, peer-educators rated it at 4.5/5, with 1=not well received and 5=very well received.

Conclusion: The origami fortune teller provided a visual, interactive, and nostalgic means for peer educators to teach through situational learning and guided discussion. The utility of our tool stems from "learning by doing" by providing patient cases to work up. This novel educational tool may be used for future peer education events on antibiotic stewardship, such as the promotion of immunizations.

Intravenous iron sucrose appropriateness based on a hospital guidance document
Ciriello D, Seyse S
Kaleida Health/Buffalo General Medical Center

Introduction/Background: A yearly review process is conducted by the request of the Pharmacy and Therapeutics committee of selected restricted medications, including intravenous (IV) iron. An IV iron guidance document was approved through the committee in March of 2018 to limit inappropriate use. The guidance document includes two algorithms to determine appropriateness of use. One algorithm is for patients with chronic kidney disease (CKD), while the other is for patients with normal renal function. IV iron is not only costly, but inappropriate use can increase the risk for iron overload, hypotension and other adverse reactions.

Objective: The primary objective was to assess the appropriateness of IV iron based on the approved guidance document.

Methods: A medication administration report was generated which identified all patients who received IV iron from July 1, 2019 to September 30, 2019. History of chronic kidney disease, iron studies, and transfusion requirements were used to determine appropriateness based on the specified algorithm. Descriptive statistics were used to describe the results.

Results: During July 1, 2019 to September 30, 2019, 102 patients received IV iron. Thirty-seven had CKD. Use was appropriate in 33 patients (89.2%) based on the algorithm. Nine of the 37 patients (24.3%) were on hemodialysis and 15 patients (40.5%) received epoetin alfa. Sixty-five patients did not have CKD. Use was appropriate in 43 patients (66.2%). Appropriateness was unclear for nine patients due to a lack of iron studies. Use was inappropriate in 17 patients because they had received packed red blood cell transfusions (PRBCs) within 72 hours prior to administration of IV iron.

Conclusions: IV iron was used more appropriately in patients with CKD than in patients without CKD (89.2% vs. 66.2%, respectively). Education to pharmacists to recommend iron studies and limiting use in patients who received PRBCs within 72 hours can increase appropriateness in patients without CKD.

Assessing the impact of the meningitis/encephalitis diagnostic panel on antimicrobial stewardship
Doan TL, Garellek J, Varghese S, Rasul R, Schwartz R, Donaghy H
Northwell Health System - Long Island Jewish Medical Center

Introduction/Objective: The multiplex polymerase chain reaction (PCR) test for meningitis/encephalitis (ME) is an assay that is available to detect 14 organisms in 2 hours from the cerebral spinal fluid. The primary objective of this study was to assess the clinical impact of this assay on antimicrobial stewardship.

Methods: This is an IRB-approved, retrospective cohort study of a random sample of patients admitted between 7/2015 - 12/2018, stratified by season. A chart review was performed. Information collected included: demographics, microbiology and treatment data, adverse events, length of stay, hospital readmissions, and mortality. Appropriate statistical analysis was performed.

Results: The study included 242 patients, of whom 67% had ME PCR testing performed. The etiology of meningitis was greater in the PCR compared to the non-PCR group (10.5% vs. 2.5% in PCR and non-PCR respectively). Time to de-escalation of therapy was shorter in the PCR period compared to the standard period (median 8 vs. 26 hours, $P < 0.001$). Total days of therapy was longer among the PCR group, but not statistically significant (median = 4 vs. 2, P = NS). Median length of stay was higher in the PCR period (median: 9 vs. 5.5, $P < 0.001$). Readmission rates did not differ (PCR 14.2% vs. non-PCR 16.3%, P = NS). Mortality rates were not statistically significant (8.6% vs. 3.8%, P = NS).

Conclusion: The ME PCR was associated with an earlier time to de-escalation of antibiotics. The PCR group had more days of therapy and longer length of stay, but this is likely due to a higher rate pathogen diagnosis. There was no association in readmissions. Although the study had a small sample size, this demonstrates that the ME PCR has the potential to improve patient outcomes and may help antimicrobial stewardship by shortening the time to de-escalating antimicrobials and offering more appropriate targeted therapy.

Evaluation of utilization of a sedation protocol in mechanically ventilated patients within a community hospital intensive care unit
Gregoire K, Zammit K, Zack B
Buffalo General Medical Center

Introduction: Utilization of a nurse driven protocol has been demonstrated to achieve appropriate sedation targets in mechanically ventilated patients. The Richmond Agitation-Sedation Score (RASS) is a validated assessment of sedation depth and should be incorporated into sedation protocols to achieved proper levels of sedation.

Objective: The primary objective was to compare compliance of nursing driven targeted sedation utilizing RASS to achieve the desired level of sedation. Secondary objectives included appropriate use of the institution's ICU sedation order-set, time on mechanical ventilation, and choice of sedation medications.

Methods: This is a single-center, retrospective medication use evaluation within a community hospital ICU. Education on the institution's ICU sedation policy with an emphasis on the proper use of sedation targets was completed throughout July 2019. Documented RASS goals were compared to prescribed RASS goals for the 3 months prior to and after policy education was completed. Patients admitted to the medical or surgical ICU on mechanical ventilation where a RASS goal was ordered were included. Patients on neuromuscular blockers, diagnosed dementia, or admitted for alcohol withdrawal were excluded. This study was approved by the hospital's Pharmacy and Therapeutics Committee. Descriptive statistics were used to interpret results.

Results: Sixty-eight patients were included; 36 between April-June 2019 and 32 between August- November 2019. The mean RASS goal achieved within the first 48 hours did not differ between April-June and August-November (33% vs 31% respectively, P = 0.395). After education, the utilization of the sedation order set increased, however this was not statistically significant (33% from April-June vs 47% from August-November, P = 0.157). There was no difference in time on mechanical ventilation or choice of sedation.

Conclusion: Education alone was not effective for appropriate sedation management practices. Additional support such as pharmacist involvement may help achieve sedation targets for mechanically ventilated patients.

Comprehensive transition of care education program to improve medication adherence and compliance following orthopedic surgery*
Kasbekar R, Cronin MA, Dengler N, Krauss E, Segal A
St. John's University, Northwell Health Syosset Hospital

Introduction/Objective: The purpose of this study is to assess patients' utilization of discharge educational tools after orthopedic surgery. Following total hip and knee replacement, patients are provided with a Transition of Care booklet and medication calendar. Polymedication and greater dosing frequency can negatively impact a patient's use of therapy. It is imperative for patients to receive comprehensive education of medications prescribed to ensure that patients are adherent and compliant after orthopedic surgery.

Methods: Patients aged 18 and older undergoing total hip or knee replacement at Syosset Hospital in the past 6 weeks were contacted postoperatively via phone. All patients watched a Transition of Care video and were given a Transition of Care booklet and medication calendar. Patients were asked if they read the booklet, used the calendar, how often they used the calendar, if the calendar was easy to use, and if they found the calendar and booklet beneficial. Subgroup analyses such as gender, age, discharge disposition, and type of surgery were performed to identify any significant adherence patterns.

Results: The study group included 62 patients while 69% were knee replacement patients and 31% were hip replacements. Sixty-six percent were discharged home while 34% were discharged to subacute rehabilitation. Forty-seven percent read the Transition of Care booklet, and 87% used the medication calendar. Of the patients who went directly home, 98% used the calendar. Fifty-two patients found the calendar easy to use, and 38 patients used the calendar every day.

Conclusions: This retrospective study was conducted to evaluate the utilization of Transition of Care materials after postoperative surgery. Overall, 87% of study patients used the calendar to guide medication management. Of those discharged directly home, 98% used the calendar and considered the calendar a useful tool. Patient counseling is important upon discharge to prevent discrepancies in regimen and prevent further hospital readmissions.

A retrospective review of the effect of metformin in metastatic prostate cancer*
Lam SY, Lee CS, Liu W, Sison C, Zhu X
Monter Cancer Center, Northwell Health; St. John's University

Background: Prostate cancer is the third most common cancer in the United States in 2019. Current treatments of metastatic prostate cancer are mainly hormone therapy and chemotherapy. The anticancer potential of metformin on metastatic prostate cancer remains obscure.

Objective: In this study, we aim to investigate the significance of patients with prostate cancer taking metformin in addition to their current treatment.

Methods: An IRB approved retrospective review of metastatic prostate cancer patients between 2014 and 2017 at the Monter Cancer Center, Northwell Health was conducted. Patients were categorized into either metastatic castration resistant prostate cancer (mCRPC) or hormone- sensitive prostate cancer (mHSPC). Within both of these groups, patients were further stratified to those who received metformin versus those who did not. Radiological progression free survival (PFS) was evaluated based on PCWG3 and RECIST criteria. 6-month PSA response and overall survival (OS) were also evaluated in this study.

Results: A total of 281 subjects with a minimum of 3 months follow-up were included for analysis. Patients were known to have either mHSPC (n=205, 73.2%) or mCRPC (n=75, 26.8%) and taking metformin (n=66, 23.5%) or not (n=215, 76.5%). Among those with a recorded 6-month PSA response, 70.4% (38/54) had a response in the metformin group and 72.9% (140/192) had a response in the non-metformin group. Overall median progression-free survival was estimated to be 17 months. There was no significant difference in PFS between metformin groups (16.6 vs. 17.3; $p<0.88$). Median overall survival was estimated to be 81.5 months. There was a significant difference in survival time between metformin groups (148.5 vs. 69.4; $p<0.02$).

Conclusions: No significant differences were found in 6-month PSA response or PFS; however, there was a significant difference in OS amongst patient who were in the metformin group and those who were not.

Review of peripheral administration of hypertonic saline
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Buffalo General Medical Center

Introduction: Sodium chloride 3% has been traditionally administered via a central venous line because of perceived risk of infiltration and tissue injury due to its high osmolarity. However, patients requiring 3% NaCl often require timely administration, predominantly for reduction of elevated intracranial pressure. Kaleida Health's Pharmacy and Therapeutics Committee approved peripheral administration of sodium chloride 3% in December 2017, with a maximum duration of 72 hours. This policy was approved with the contingency of periodic assessment for incidence of adverse events. There are currently no large trials assessing the safety of this practice.

Objective: The primary objective is to determine the incidence of adverse events from administering sodium chloride 3% peripherally.

Methods: This retrospective chart review was approved by Kaleida Health's Pharmacy and Therapeutics Committee. A query of medical records was generated to identify all patients who received 3% NaCl from December 2017 to October 2019, for a sample of 150 orders. Data was collected on: type of line access, protocol compliance, and adverse reaction. There were no exclusion criteria. Analysis was conducted utilizing descriptive statistics.

Results: After identifying and reviewing 150 orders between the prespecified dates, 80 were of unique patients administered 3% NaCl. Majority of patients had a central line placed on initiation of infusion, as only 30 patients (37.5%) had peripheral access. Patients with only peripheral access had 1 (3%) adverse reaction noted, which consistent with infiltration.

Conclusion: Although the institution now allows for peripheral administration of sodium chloride 3%, providers at Kaleida Health appear to preferentially place central lines prior to initiation. Of those administered 3% NaCl peripherally, adverse reaction rates are low and of low clinical impact. Though larger, prospective studies are required to more definitively determine the safety of peripheral administration of 3% NaCl, it is reasonable to continue this practice.

Medication use evaluation of tigecycline at a public teaching safety net hospital
Thomas J, Dejesus K, Lee Y, Kim J
St. John's University College of Pharmacy and Health Sciences

Background: Regardless of its broad spectrum activity against extended-spectrum beta-lactamases (ESBLs), Acinetobacter, methicillin resistant Staphylococcus aureus (MRSA), and vancomycin resistant Enterococcus (VRE), tigecycline is a last line antibiotic due to the Food and Drug Administration (FDA) warnings for increased mortality. At Nassau University Medical Center (NUMC), tigecycline is a tier 1 restricted antibiotic requiring infectious disease (ID) approval at all times.

Objectives: In response to loosen tigecycline restrictions to allow for intensive care unit (ICU), emergency department (ED), and overnight use without ID approval, the Antimicrobial Stewardship Team (AST) conducted a medication use evaluation (MUE) to assess tigecycline use at the institution.

Methods: This study is an institutional review board-approved, retrospective chart review on patients 18 years of age and over who received tigecycline from January 2018 to December 2018. Patients were identified from antibiotic usage data monitored by the AST. Patient baseline demographics were collected, which included age, height, weight, sex, location, length of stay (LOS), comorbidities, antibiotic allergies, tigecycline indication, dosing and duration, concomitant antibiotics, microbiological results, and 30-day all cause mortality.

Results: The MUE included a review of 25 episodes of tigecycline use in 23 patients at NUMC in 2018. The mean duration of tigecycline therapy was 5 days. 17 (68.0 percent) patients received the standard dose, 3 (12.0 percent) patients received a load of 200mg, and 5 (20.0 percent) patients did not receive a loading dose. Sources of infection included pneumonia (13), urinary tract infections (UTI) (11), wound infections (2), and intra-abdominal infections (1). Tigecycline was associated with a high 30-day mortality rate (56.5 percent).

Conclusion: Based on the results of this MUE, the AST decided not to loosen restrictions for tigecycline and will develop criteria for use, including dosing recommendations for tigecycline.

An evaluation of inpatient ceftaroline use between two hospitals in the same health system
Webb N, Danek M
Buffalo General Medical Center

Introduction/Objective: Current FDA approved uses for ceftaroline include community acquired pneumonia and skin and soft tissue infections. Several promising off-label uses are described in the literature, including complicated gram-positive infections. Within the healthcare system, ceftaroline is available on formulary for patient use, following approval by an infectious disease physician. The purpose of the medication use evaluation is to evaluate the current use of ceftaroline in both on and off-label indications at Buffalo General Medical Center (BGMC) and Millard Fillmore Suburban Hospital (MFSH). Cost was also be assessed.

Methods: Retrospective, observational study from July 2018 to July 2019. An electronic report of patient encounters was generated, including patients at least 18 years old with documentation of at least two administered doses of ceftaroline. Patients admitted for cystic fibrosis exacerbation were excluded.

Results: 1569 doses of ceftaroline, representing 83 individual patient encounters, were reviewed for inclusion into the medication use evaluation. Ultimately, 80 patient encounters (1489 doses) were included for evaluation and 3 patient encounters (80 doses) were excluded due to indication for cystic fibrosis exacerbation. Indications for use varied greatly between the two sites. At BGMC, the use was primarily in patients with persistent MRSA bacteremia without or without infective endocarditis (30/38, 78.9%) and as a second or third line agent. In contrast, the use at MFSH was spread across several indications including: empiric for cellulitis/SSTI (21/42, 50%), osteomyelitis (9/42, 21.5%), and empiric for pneumonia (5/42, 11.9%).

Conclusion: The use of ceftaroline between sites varied greatly in the period of July 2018 and July 2019. Due to the associated higher cost of the antibiotic and wide-availability of effective alternative medications, use in practice should be limited and reserved for therapy that is more definitive rather than empiric.

Characterization and impact of pharmacy student participation on hematology/oncology APPE Rotations in varied practice settings*
Yacobucci M, Lombardi C, Briceland LL, Zeszotarski P
Albany College of Pharmacy and Health Sciences; St. Peter's Health Partners, Albany, NY

Introduction/Background: The scope/impact of student contributions in hematology/oncology (h/o) settings, and impact of student participation on professionalization has yet to be characterized.

Objective(s): Study aims were to characterize and evaluate the impact of APPE student participation in h/o APPEs on the practice site, and on student professionalization.

Methods: From student evaluations of h/o APPEs during cycles 2016-2019, student self-reported rotation activities and 300-500 word post-APPE self-reflections describing meaningful impact were reviewed; rotation activities were categorized into like groupings and sub-categorized into direct and indirect patient care. From each self-reflection, 3 reflection themes of impact were extracted. To assess the impact of student contributions on the practice site, an electronic survey was disseminated to 33 preceptors of h/o APPE cohort. APPE grades served as evidence of student aptitude.

Results: 171 students completed h/o APPE in private or hospital-affiliated ambulatory care (133) and/or inpatient (38) settings; 11 were NCI cancer centers. All but seven students (0.04%) earned a grade of >/= B+. Of 932 self-reported student activities, five most common were: evaluating patient pharmacotherapy (209); in-services to medical staff (132); non-chemotherapy patient counseling; answering drug information questions (96) and chemotherapy patient counseling (82). A majority of activities (64.6%) involved direct patient care. Survey results from 16 preceptors identified top five most impactful student activities: evaluating pharmacotherapy; providing pharmacotherapy recommendations during inpatient rounds; medication education/adherence resources; non-chemotherapy patient counseling and in-service presentations. 400 reflection themes were extracted and thematically categorized: Practice/Research Skills/Curricular Immersion (88); Self-awareness (75); Communication Skills/Teaching/Counselling (59); Patient Interaction/care (50); Interprofessional education/team-based collaboration (49); Professionalization (40); Career Development/Pharmacists' Roles (39).

Conclusions/Discussion: Pharmacy students make significant direct patient care contributions to h/o practice settings by evaluating pharmacotherapy and providing education to patients and healthcare personnel. Participation in h/o APPEs is highly influential to the professionalization of students, particularly in developing skills in oncology practice, patient interactions/communications, and empathy.

Cost analysis of recombinant activated factor VII versus 4-factor prothrombin complex for bleeding after cardiothoracic surgery
Gozelski R, Guarino M, Vink T, Larson D
Mercy Hospital of Buffalo

Background: Nearly one third of cardiac patients experience substantial bleeding following cardiothoracic surgery. Off-label use of recombinant activated factor VII (rFVIIa) or 4-factor prothrombin complex concentrate (4PCC) are options to treat major post-operative bleeding. Use of these products is becoming more favorable to decrease the need for fresh frozen plasma (FFP), given its risks with administration. 4PCC may have some advantages over rFVIIa such as decreased cost and decreased risk of thromboembolism.

Objective: The primary objective is to compare the acquisition cost of rFVIIa, dosed at 90 mcg/kg, to an equivalent dose of 4PCC, determined to be 25 units/kg, for first dose factor replacement in patients with bleeding after cardiothoracic surgery over the past two years. The secondary objective is to assess current outcomes of patients receiving rFVIIa at this institution which are chest tube output 24 hours post-operatively, rates of thromboembolic events, rate of acute kidney injury, hospital length of stay, and units of FFP administered.

Methods: This study was approved by the Catholic Health Institutional Review Board. A retrospective chart review was conducted using the electronic medical record at a 360-bed tertiary care hospital in Buffalo, New York. Non-pregnant patients ≥ 18 years of age who received at least one dose of rFVIIa for bleeding after any type of cardiothoracic surgery between October 2017 and October 2019 were included.

Results: Thirty-three patients were reviewed for this study with twenty-nine patients meeting inclusion criteria. The average cost of rFVIIa, per patient, was $14,648. The cost of an equivalent dose of 4PCC, at 25 units/kg, was calculated to be $3,806. Projected annual savings determined to be $157,223.

Conclusion: Off-label use of 4PCC to treat major bleeding following cardiothoracic surgery offers significant cost savings in comparison to rFVIIa.

Efficacy and use of push-dose epinephrine for peri-intubation hypotension
Harklerode J, Ciaramella C, Adebayo A
The Brooklyn Hospital Center

Introduction/Background: The efficacy of push-dose vasopressors has been well described in anesthesia literature as a temporizing agent for hypotension in the operating room (OR); however, there is currently limited research available for use outside the OR.

Objective: The purpose was to describe the effect of and current practice patterns for the use of PDE for peri-intubation hypotension.

Methods: This was a retrospective, descriptive, Institutional Review Board-approved study over a three-month period from October 30, 2019 to January 31, 2020. Inclusion criteria were patients greater than or equal to 18 years of age, underwent intubation, had hypotension defined as systolic blood pressure (SBP) less than 90 mmHg, and received at least one dose of PDE during the peri-intubation period defined as 30 minutes before and after intubation. The primary endpoint was change in hemodynamic parameters such as SBP, diastolic blood pressure (DBP), heart rate (HR), and mean arterial pressure (MAP) before and after administration of PDE. Statistical analysis was performed using a paired t-test for the primary endpoint and descriptive statistics for all other endpoints.

Results: Administration of PDE resulted in a statistically significant increase in SBP (80 mmHg vs 135 mmHg, $p = 0.02$) and MAP (60 vs 90 mmHg, $p = 0.03$). There was no statistically significant change in DBP and HR. Of the 8 patients who received PDE, 5 (63%) achieved resolution of hypotension. After PDE administration, 6 patients (75%) were initiated on a norepinephrine infusion.

Conclusion: PDE used during the peri-intubation period showed temporary stabilization of blood pressure until CVI was initiated. PDE may be useful as a bridge to CVI in practice settings where CVI is not readily available or as a quicker means to stabilization of blood pressure in a critically ill patient.

Time to administration of anticonvulsant medications in status epilepticus and seizures
Li J, Zhang T, Der Nigoghossian C, Berger, K
NewYork-Presbyterian Hospital/Weill Cornell Medical Center

Introduction/Background: Treatment guidelines for status epilepticus (SE) recommend administration of an anticonvulsant within the first 5 minutes of seizure onset. Delay in the treatment of seizures and SE can predispose patients to increased morbidity and mortality. The timing needed to compound intravenous piggyback (IVPB) formulations of anticonvulsants can delay their administration. Previous studies have shown that intravenous (IV) push administration of anticonvulsants was safe and associated with a shorter time to administration than IVPB.

Objectives: The purpose of this study was to quantify the time from order entry to administration of the first IVPB anticonvulsant for the treatment of SE or seizures.

Methods: Adult patients who received IV levetiracetam or fosphenytoin in the intensive care unit at Weill Cornell Medical Center between January 1, 2017 and December 31, 2019 were screened for inclusion. Patients were excluded if they received an IV anticonvulsant for seizure prophylaxis or the first dose prior to hospital admission. The primary outcome was the time from order entry to administration of the IVPB anticonvulsant. The study was approved by the institutional review board, and a waiver of consent was granted.

Results: A total of 27 patients were included (15 SE, 12 seizure). The median time from order entry to administration of IVPB anticonvulsants was 44 minutes (24.5 min in SE, 69 min in seizure group). Forty-eight percent of patients (10 SE, 3 seizure) received the first dose of IVPB anticonvulsant within 30 minutes of order entry.

Conclusions: Overall, it took greater than 30 minutes for most patients to receive the first dose of IVPB anticonvulsant for the treatment of SE or seizures. The time to administration was shorter in the SE group, which may be due to the urgency in treating SE. Future studies should evaluate the difference in time to administration with the use of IV push.

Case Report

Severe hypoglycemia secondary to hydroxychloroquine: A case report
Studlack E, Olson S, Scott J
D'Youville School of Pharmacy

Introduction: Hydroxychloroquine is an aminoquinoline antimalarial agent used to treat various autoimmune diseases. Typical adverse reactions include retinopathy, blood dyscrasias, and dermatitis. Cases of hydroxychloroquine-induced hypoglycemia have been reported after weeks to years of treatment. We describe a probable case of hydroxychloroquine-induced severe hypoglycemia presenting as a seizure in a non-diabetic patient after two doses.

Case: A 38-year-old Caucasian female was brought to the emergency department (ED) via emergency medical services (EMS) for a witnessed seizure event. Pertinent past medical history included end-stage renal disease (ESRD) on hemodialysis (HD) secondary to polycystic kidney disease, seizure disorder controlled for the last 10 years, and recently diagnosed systemic sclerosis. Pertinent home medications included levetiracetam, and hydroxychloroquine that was started the day prior to admission. Pertinent labs upon EMS arrival include an undetectable blood glucose (BG) reading x four on two separate devices. Laboratory studies on arrival to the ED were significant for hyperkalemia (7.7 mmol/L) and anemia (hemoglobin 5.9 mg/dL). A repeat fingerstick BG was checked on arrival and was < 40 mg/dL. Toxicologic studies were negative. A levetiracetam level was checked and was 16.6 mcg/mL indicating compliance which the patient endorsed. An ampule of dextrose 50% was administered and repeat BG was 116 mg/dL. Head computed tomography (CT) was negative for abnormalities. Hydroxychloroquine was discontinued and the patient was discharged on hospital day three with normal glucose studies for the duration of her hospitalization.

Discussion: In this patient, the temporal relationship of hydroxychloroquine initiation and presentation, extensive objective evidence of severe hypoglycemia, and seizure upon presentation make this a unique case. The Naranjo Adverse Drug Reaction Probability Scale indicated a probable reaction with a score of 7. Conclusion: Although rare, hypoglycemia should be monitored for in patients at risk of developing or having signs and symptoms of hypoglycemia taking hydroxychloroquine.

2020 NYSCHP Presidential Outgoing Speech

It has been my honor to serve as President of the New York State Council of Health-system Pharmacists this past year. I wish we could all be together in Saratoga Springs to celebrate and network together.

It is hard to imagine the events from a year ago when the current Coronavirus Pandemic has overtaken our lives. So many have endured so much pain and hardship. Speaking of hardship, after we decided to cancel the Annual Assembly, I called Christopher Jerry who was our keynote speaker for this year to inform him of our decision. We spoke for 45 minutes on multiple subjects and at the end he said, consider me a new friend and I will always value the New York State Council of Health-system Pharmacists. The passion in his voice reminded me that although these are difficult times, embark on a path to pay it forward, cherish the opportunities that make you a better person.

The theme of this year's Annual Assembly was Engage, Lead, Advocate, which aligns with our 3 year-strategic plan. Approved by the Board of Directors in October, we are beginning to work immediately on structure, function, and governance. A focus group to provide feedback about operations and a strategic planning committee to ensure success of executing all our objectives. In order to position the Council as the premier organization and "go-to" source for all Pharmacists in NYS, ongoing leadership development and training is vital in our success to move our profession forward.

The COVID crisis has led us to work, think, and act differently. In my opening address, I mentioned how Bobby Fischer won the World Chess Championship by stunning his opponent with his C4 move in the last game. I asked the question… what is our C4 move? Perhaps it's stepping up during a pandemic, request the Governor sign an Executive Order to make us providers and expand immunization to all CDC vaccines in adults and pediatrics. Now is the time to stop asking permission for what we want to do and claim our place in the field of healthcare. We are not just essential workers; we are vital to the survival of the entire health care system.

Thank you to everyone who made this a successful year for the Council. All of us have worked hard, dedicated our time, and managed to overcome significant challenges. Thank you, Anthony, for serving your Presidential term and providing us your leadership. Heide, I wish you a successful year ahead as the new President of the New York State Council of Health-system Pharmacists.

Let us try and stay positive, forget our differences because in the end our fate rests in each other's hands.

Thank you.

Lisa Voigt, PharmD, BCPS, BCCCP
Immediate Past-President

Thank You!

NYSCHP would like to thank the following outgoing board members for their services and dedication to our organization!

Anthony J Longo, Sr, BS, RPh, PharmD, MBA Past-President

Elizabeth Cobb, PharmD
Director of Industry Affairs

Elizabeth Shlom, PhamD, MBA, BCPS
Chair, House of Delegates

Karen Berger, PharmD, FASHP, FCCM, BCPS, BCCCP
Director of Education and Professional Development

Fond Memories From Past Annual Assemblies