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The Scariest of Questions...

By: Jenna Strobl



“What do you want to do when you get your license?”

No, not that license, silly, your pharmacy license! This is a question that I've been asked by almost every single person that finds out I'm in pharmacy school. And up until this year, my answer has always been, without a doubt, that I'm extremely happy with my job as an intern at Bur-

henn's independent pharmacy, but I'm keeping my options open and taking my time deciding. That time, I am all too quickly realizing, is coming to an end. And although I'm slightly apprehensive about stepping into the next phase of my life, I know that starting my 6th year rotations is just the beginning.

This issue of the RxTRA is focused on different types of intern experiences that students have had. My hope is that you read it, learn something you didn't know before, and take that knowledge to decide whether it's something that you would like to try out yourself. From nuclear pharmacy to chain pharmacy, hos-

pital pharmacy to specialty pharmacy, there is something for everyone in this issue.

While it may seem like you have to have the answer to that very daunting question ready, you don't. Take the time you spend at Duquesne to experience as many different options as you can.

When you begin to schedule rotations, try not to stick with only sites that you're comfortable or familiar with. Push your boundaries a little bit; try something different. That way, when you graduate and people ask you what you want to do with your career, you won't have to hesitate anymore, you'll know.

Chain Pharmacy

When someone asks me what I do at Walgreens, I usually reply, “Everything the pharmacists does except verify.” To elaborate, I enter prescription information, fill prescriptions, compound medications, counsel patients, call doctors for verification, clarification, refills, and prior authorizations, stock medica-

tions, transfer prescriptions, and call insurance companies to resolve issues. It's demanding and challenging, but what I love most about working in a retail setting is how unpredictable it is. Every day I encounter new people with new stories to tell. I value the relationships I have established with my patients over

By: Lauren Vrabel

the past four years, and it

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Chain Pharmacy (Continued)

seems to me that this is a quality that is shared by all Walgreens' pharmacists and pharmacy staff. We really do care, and that is what makes us different from our competition. "People don't care how much you know until they know how much you care." This is a quote I first heard from Dean Bricker, and it's stuck with me throughout my career at Walgreens.

I was asked to share a story about one of my most rewarding experiences at work, but I've found that there is not one single event that I could describe as more significant than another. To me, the most satisfying part of the job is to know that I was able to make a difference to a sick patient by helping to ensure they received the appropriate therapy. This happens almost daily, and each instance is personally reward-

ing in its own way.

Upon graduation I would love to continue working for Walgreens. However, I plan on keeping my options open and relying on my rotations during 6th year to offer some guidance on my career path selection

"Keith and I both find it rewarding when we catch mistakes that could have seriously harmed the patient had the patient received the medication."



Hospital Pharmacy

By: Matt McCrossin & Keith Miller

There are a multitude of pharmacy fields out there, but one of the more well known is hospital pharmacy. Keith Miller and I, Matt McCrossin, both work at hospitals. Keith works at a larger hospital in Harrisburg, called PinnacleHealth Harrisburg Hospital. It is a 500-bed hospital that treats patients with varying medical conditions. It has a neonatal intensive care unit, women's care unit, and many cancer centers within its system. The hospital that I work at is UPMC St. Margaret hospital. It is a 300-bed community hospital. It deals with more geriatric patients and patients getting orthopedic surgeries.

Despite the hospitals being different, many of the duties that we are responsible for carrying out are the same. Some of the important responsibilities include communicating with physicians and nurses, refilling automated dispensing machines (Pyxis and Accudose), deli-

-ering medications to the floor, compounding IVs, and special projects that are given to us by our managers. An example of one of the special projects that I have been assigned to do in the past was to look at dispensing records from our automated dispensing machines and compare those records to the patient's medical record to determine if other health care professionals were stealing narcotics. These responsibilities help to differentiate our sites from the other pharmacy fields.

Our sites are different than many others due to the fact that we are responsible for compounding IV's, interacting with many other healthcare professionals on a daily basis, little patient interaction, lack of having to deal with insurance issues, and the ability to see a vast array of different

medications that are not common to many of the other fields of pharmacy. The different medications include chemotherapy agents, biological agents, total parenteral nutrition, medications for patients who are coding, etc. Having the opportunity to see all these different medications helps when it comes to the classroom as well, because of the fact that you already have heard of these medications and usually have a basic understanding of what they help to control or cure in the body.

Keith and I both find it rewarding when we catch mistakes that could have seriously harmed the patient had the patient received the medication. Whether it be catching a wrong medication for a patient when we are delivering

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Hospital Pharmacy (Continued)

medications to the floor, or identifying wrong doses for patients when we are compounding IVs, it is always rewarding to know that you made a difference in their care and stopped a potentially harmful situation. Due to a lack of our interaction with patients, it is hard for us to see the impact of our work. The lack of patient interaction has inspired Keith to pursue a career where there is more patient interaction.

Upon graduation, Keith wants to pursue a career in more of an

ambulatory care setting. This is due to the fact that he wishes to have more patient interaction, do MTM counseling, and now has less of an interest in hospital work as well. I feel differently than him about this. I thoroughly enjoy the hospital/acute care setting and I am planning on pursuing a residency whenever I graduate. I like working with other healthcare professionals and I like working with acute care topics. I would have to say that my hospital experience has driven me to this decision and I

thoroughly look forward to the future.



Independent Pharmacy

I am doing my pharmacy internship at Curtis Pharmacy, an independent pharmacy located in the small town of Claysville, PA. As an intern, some of my responsibilities include putting prescriptions into the computer, filling prescriptions, compounding prescriptions, and dispensing medications to the patients, while occasionally counseling them under my pharmacist's supervision. Because we are one of the only pharmacies around the area where I work, I get to take on some specialized jobs such as blister-packing monthly cycles of medications for personal care homes around the area and making IV solutions and other drug mixtures for a surgery center. I also get to help out in our compounding lab where we make a variety of different medications specialized for each patient. I have helped compound anything from capsules or suspensions for dogs and cats to hormone replacement creams and suppositories.

One of my favorite parts about working at an independent phar-

macy in a rural area is that we get to personally know our customers. Unlike most chain pharmacies where there are too many customers to get to know, I get the advantage of only having a small amount of regular customers. Because most of the customers are regulars that everyone knows, I rarely encounter any angry patients screaming at me about their copays. Another advantage to personally knowing the customers is that they often will bring in cookies, candy, or sometimes even lunch for us to share. Also, because our pharmacy is not as busy as a chain might be, I get the opportunity for my pharmacists to continually be teaching me about medications and all the different aspects of pharmacy.

One of the most memorable experiences I have had during my internship so far was when one of our customers came in to pick up her mother's medications right before we were getting ready to close on a Friday night. At first everything seemed like the normal last minute customer picking

up her medications. Then, my pharmacist started talking to her about her mother who is suffering from cancer. Instantly the customer started crying because her mom wasn't doing very well as she began to tell us about her situation. My pharmacist and I stood there with her and comforted her for about 20 minutes after closing, but the thing that stuck out to me the most was what she said while she was leaving. She told us, "This is why I love coming here, because you guys care so much." When she said that, it really made me understand why I wanted to go into the profession of pharmacy. Everything we do as pharmacists is done to help our patients in the end!

By: Jordan Moore



Specialty Pharmacy

By: Rachel Marini



“This experience gave me a feeling of accomplishment and that I made a difference in someone’s life that could have been easily overlooked.”

My name is Rachel Marini and I am in my fourth year of pharmacy school at Duquesne University. I have been working at my current internship since September 2010. What makes my internship experience unique is the fact that the medications are shipped out to the patient and doctors’ office instead of the patient coming to the facility to pick up their medications. The pharmacy is called Walgreens Specialty Pharmacy and some consider it to be a mail order pharmacy because of the shipment of medications for delivery. Technically, this is considered a specialty pharmacy because most of the medications dispensed are for a specific disease state such as multiple sclerosis, rheumatoid arthritis, osteoporosis, oncology, psoriasis, or transplants to name a few. The medications are shipped all over the country including Hawaii and Alaska from our site. Some of the medications are sent to the doctor’s office where they are administered there at a patients’ appointment and others are delivered directly to the patients’ home for administration. Examples of the common medications we dispense include Humira, Copaxone, Remicade, Synvisc One, and Enbrel. A large amount of the medications that are shipped require refrigeration which calls for special packaging considerations on ice to ensure the medications are still able to be used when delivered across the country.

There are many responsibilities which are similar to a normal retail pharmacy and some which are completely different at this location. For example, my responsibilities at Walgreens include processing new prescriptions in the system to each patient’s profile and actually pulling the drugs from the refrigerators to be shipped. Another task we perform is to look up each patient’s insurance information and calculate the cost they will be responsible for paying for each medication. Some of the standard jobs that are similar to a retail pharmacy are faxing the doctors’ office for clarification of

a prescription, calling the doctor for refills, and working with the doctors’ office to ensure each prescription is completed correctly. One of the main tasks which I enjoy the most is making patient and doctor calls to set up deliveries of medications. This is something that gives me a sense of accomplishment that I am making a difference in someone’s life. During the patient calls, we must perform “clinical assessments” where we ask the patient questions about how their disease state is progressing from their last refill. Asking these questions are specific for the disease state that patient is being treated for and I believe that it helps me understand more about the medications and disease states.

Two of the main differences between this pharmacy and a normal retail pharmacy are that there are no patients that come to the pharmacy and that we do not dispense “normal” and common medications that can be found in a retail setting such as antibiotics. These differences do not have a negative effect on patient outcomes but are just another way to process prescriptions. Also, at a retail pharmacy there are usually around 3 people processing a prescription including the intern, pharmacist, and pharmacy tech where as at my internship there are different people performing each individual step of the process on the computer. This means that there is a different person for attaching the prescription to the patient profile, contacting the doctor with prescription issues, processing the prescription into the system, performing insurance verification, making calls to set up delivery dates, billing, pharmacists verifying computer processing, pulling the medication and supplies from the shelf, pharmacists verifying correct medication and dosage selected, and packing the prescription to be delivered by UPS or FedEx. There are hundreds of employees processing thousands of prescriptions each day at Walgreens Specialty Pharmacy through this complex system.

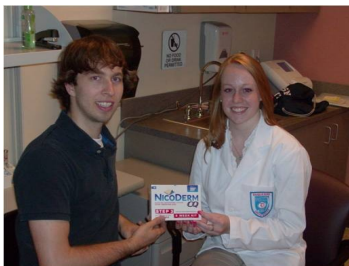
The most rewarding situation I have experienced during this internship was one day when I was doing patient calls to set up delivery dates and perform clinical assessments. Some of the questions we ask patients involve common side effects of the medications to try to avoid drug induced side effects. One of the patients I was on the phone with was recently experiencing some of the effects I asked about in the clinical assessment and was not aware that they were caused by the medications. After making a list of her major complaints and new symptoms I transferred her over to the pharmacist where together they worked to resolve the side effects by making simple changes that the pharmacist recommended through counseling. If I did not perform the clinical assessment for that patient, she may still be suffering from the side effects and possibly could have discontinued the medication all together because of the side effects. This experience gave me a feeling of accomplishment and that I made a difference in someone’s life that could have been easily overlooked.

I am not sure what my plans are once I graduate. I still feel like there are so many more aspects of pharmacy that I have not experienced yet and would like to make my career decision after experiencing more positions. I greatly enjoy Walgreens Specialty Pharmacy and am excited for different experiences as an intern at this unique pharmacy. I am also looking forward to our hospital rotations this summer as well as all of the sixth year rotations to help me learn more about pharmacy and the different types of locations available to practice. I would recommend this experience to anyone because it is just one example of how broad the field of pharmacy is aside from hospital and retail settings.

Walgreens
Specialty Pharmacy

The Center for Pharmacy Care

By: Chelsea Harrison



Over the past year, I have enjoyed the opportunity to work in a unique and rewarding new place: The Duquesne University Center for Pharmacy Care. The center is an ambulatory care clinic located on the Duquesne University campus. I applied for the position after exposure to clinical assessment in class. After class, I realized ambulatory care was a rewarding career path I had not considered. During my time, I have enjoyed working closely with faculty in a continuous learning environment. I have been afforded invaluable experience and confidence in my abilities and I am eagerly considering pursuing a career in ambulatory care.

Ambulatory care is a type of outpatient pharmacy in which patients walk in, receive testing/counseling/treatment, and leave. The care they receive varies in each setting, but the Center for Pharmacy Care primarily focuses on preventative medicine in the form of screenings, vaccines, and medication reviews. As an intern, my duties consisted of distinct responsibilities, depending on location. The first responsibility involved traveling with the Spirit of Health Van to provide screening and counseling to patients on cholesterol, bone density, body composition, and blood pressure. At the screenings, I maintained the independence to practice skills and gain confidence in counseling and ambulatory care abilities. While a pharmacist was always available, I was free to talk to patients independently. When I worked from within the center, I was responsible for preparing the exam rooms for patient appointments and preparing materials

to be taken to outside health screenings. I also kept track of records from patient visits and outside events. Additionally, there were special projects for each intern. I had the opportunity to work with one other intern on marketing a new smoking cessation program for the center that will likely continue for several years.

This internship was a remarkably rewarding experience. One of my favorite experiences was with the Spirit of Health van at a site in Millvale with Dr. Laux. The site is located in a food kitchen where we conduct screenings in the morning before a rousing bingo game starts (after which we are ignored and wouldn't dare to intrude). On my first trip there, I met several patients without health insurance that were incredibly grateful for our help. During one specific screening, I had the opportunity to test a patient's cholesterol; he had never had testing done before. His results were high. He had no insurance, no primary care physician, and could not afford medications. I counseled him on different lifestyle changes he could try and he left feeling confident they would improve his health. When I visited the site again two months later, he returned to tell me he had changed his lifestyle and he lost 15 pounds. His numbers showed a change in the right direction. The patient expressed that he was confident he could continue to make the necessary changes. I felt very proud that this man had taken my recommendations and implemented them in his life to improve his health. It was the first time I truly felt that I made a significant impression on a patient and his long-term health.

There are some aspects of this position that are not as rewarding, but nevertheless necessary for the cen-

ter's operation. They include emptying trash receptacles and stocking exam rooms. Additionally, it is unlikely this position can serve as your primary paycheck. The numbers of intern hours available are limited, and hours worked at this internship do not count toward your state required hours. Furthermore, if you work as an intern at the Center for Pharmacy Care, you are not able to complete a sixth year rotation there. Despite the few drawbacks, the benefits of working at the center for a year are too significant to sacrifice for the possibility of a one block rotation. I feel confident that I can provide any of the services offered at the center to patients on rotation with pure, professional confidence.

After working at this intern site, I realize that community pharmacy is not for me. I don't have any established future plans, but I know I need the opportunity to work closely with patients and other health care professionals to push my abilities and remain excited about my career. For now, I plan to obtain and complete a residency, though I am still deciding among clinical pharmacy, pediatrics, and ambulatory care. I am hopeful that rotations will provide me guidance as to the type of residency I would like to complete. I highly recommend this internship to any student decided or not about the type of pharmacy career they hope to pursue. After my experience at the center, I am confident that I am equipped as a pharmacist to have a positive impact on patients' healthcare.



"I felt very proud that this man had taken my recommendations and implemented them in his life to improve his health. It was the first time I truly felt that I made a significant impression on a patient and his long-term health."

Nuclear Pharmacy

By: Laura Jansen



The first response I often receive when I tell people I work with radiopharmaceuticals is “Do you glow green at night?” Thankfully, I don’t glow and no, my children will not come out mutated. I work for Cardinal Health in a small nuclear pharmacy located in the Strip District. Our staff consists of our pharmacy manager, three pharmacists, several technicians and one intern, in addition to me. My responsibilities and the processes involved in nuclear pharmacy can be hard to explain, but I’ll give you a basic overview of what exactly it is that we do.

A large part of the pharmacists’ job is to compound the radiopharmaceuticals we dispense. There are several isotopes that we use to create these products, but by far the most principal isotope we use is Technetium (Tc-99m). We obtain the isotope by eluting a generator with saline, which produces a technetium elution. You could think of this elution as radioactive saline. Using several confusing calculations, the pharmacist figures out how much of the elution they need to com-

ound a drug kit.

The drugs that we use come in vials as a dry powder. When the elution is injected in the drug vial, the drug binds to the isotope creating the radiopharmaceutical. Each drug kit we compound is quality control tested via chromatography to check that the drug is adequately bound and there are no impurities. After the pharmacist compounds a kit, it is given to a technician who will draw up unit doses into syringes according to the ordered prescriptions. The entire process is somewhat time sensitive, as the isotope is constantly losing radioactivity as it decays.

Surprisingly enough, the majority of radiopharmaceuticals we make are for diagnostic purposes. Large portions of the orders we receive are for cardiac imaging agents, which are used to identify infarcts, ischemia, and evaluate cardiac function. Other drugs we compound are used for skeletal imaging, liver or spleen imaging, gallbladder or renal imaging, and brain imaging, among others.

As an intern, I am responsi-

ble for anything and everything the pharmacist needs including taking and verifying prescription orders, compounding drug kits, filling unit doses, performing quality control tests, doing inventory, delivering drug products to the hospital or clinic, and more. The major difference between nuclear pharmacy and other types of pharmacy, besides the radiation, is the lack of patient interaction. Our field does not require us to speak with or counsel patients. Instead we deal with the doctors and health care professionals that order our products from us. Generally we receive and fill about 450 prescriptions a day.

I was initially attracted to nuclear pharmacy simply because it is so different from other types of pharmacy practice. I enjoy learning things we are not taught in class and I get to have unique experiences that many of my classmates do not. As much as I enjoy nuclear pharmacy, I would like to try other types of pharmacy practice upon graduation. However, nuclear pharmacy is definitely a field I see myself revisiting in the future.

“Do you glow green at night?”

Thankfully, I don’t glow and no, my children will not come out mutated.”



COURTESY: CARDINAL HEALTH



CardinalHealth



Diamond Drug Days

By: Lauren Lichtenfels

I do not remember the exact moment I realized that my position at Diamond Drug was a tad unorthodox for a pharmacy intern. Maybe it was when I walked into the “pharmacy” that looked more like a factory with rows and rows of bays loaded with drugs that were being packed into cards and vials by workers in scrubs, only to be sent on a winding conveyor belt to a row of waiting pharmacists who checked the products and sent them on their ways to be boxed and shipped. Maybe it was when I was assigned a workstation that was wedged between desks and computers of data entry technicians to my left and over twenty pharmacists checking prescriptions and scripts on their double-screen computers to my right. Maybe it was when the printer ran out of ink and the pharmacists called the IT department to replace the cartridge. Maybe it was when my very first phone call as a pharmacy intern was prefaced by my supervisor’s warning, “If you hear any yelling or crashing noises in the background that is just the prisoners. Don’t mind them.”

Diamond Drug is an independent pharmacy owned and operated by the Zilner family (all pharmacists, all Duquesne graduates!) that consists of a large institutional pharmacy, a medical supply store, an IV Infusion branch, and two retail locations scattered across Indiana, Pennsylvania.

After one summer as a correctional pre-packer (or worker who packs the drugs into cards and vials for correctional patients) I slid into a pharmacy intern position for the last two summers being employed within the institutional setting where Diamond leads as the largest supplier to correctional facilities in

the nation and serves as the largest independently owned pharmacy provider for nursing homes. As one sage pharmacist articulated, “Take a look around this place. These drugs, in these quantities, going to these places; you will never see a pharmacy like this anywhere else.”

My duties as pharmacy intern are just as unique as the pharmacy. Although my supervisor assigns overarching projects meant to occupy my summers, I am solely at the discretion of any and all of the pharmacists who with a “Hey, Intern! Come here,” can allocate me any task they may need completed. One day I may be calculating the prices of drugs to plug into a formulary for a potential client, the next I am writing an article to be featured in the Diamond Drug newsletter. One hour I may be preparing a written side effect profile for a curious prison nurse in Minnesota, only to be copying, stapling, and filing doctor’s credentials the next hour. I email, I call, I fax, I file, I research, I write, I type on any given day. The only duty I am responsible for daily is the calculation of Creatinine Clearances for nursing home infusion patients within the IV department, then reviewing their profiles to determine if their medication dose needs adjustment. Sometimes I am allowed to enter the IV room with the technician or I can assist at the compounding centers. But other than those two instances, I never physically work directly with the medications. I do not fill scripts; I do not even see the prescriptions. The most interaction with the drugs was a summer assignment to record the locations of every drug, in every dosage form, in the pharmacy for pharmacist reference guide; in such a large pharmacy, this project took the entire

summer and the final list was over 350 pages long.

But this diversity is what has kept me walking through the doors for three years, not only the variety in my job, but in the pharmacists, as well. Over 40 pharmacists are employed by Diamond and a number are on hand at any given time. There is a correctional compounding pharmacist; there is a nursing home compounding pharmacist. One pharmacist is an HIV specialist as this disease state is prevalent in prison populations. Another pharmacist specializes in technology, supervising the IT department and maintaining the computer programming that keeps the pharmacy in motion. Some pharmacists work as consultants, going out for monthly review at the nursing homes. Some pharmacists prefer to work at the retail locations. Some pharmacists act as salespeople seeking out new customers or keeping relations with current customers. The pharmacists who work within the institutional pharmacy may stand and check products on the line, may sit at the computers running scripts and answering phones to take down prescriptions or answer questions, may be in the IV room checking products, or may be checking compounding products. The diversity of the job and my accessibility to so many pharmacists is what makes my internship so special. And although I may not know what type of pharmacy I want to pursue in the future, the odds are that I may be able to find my niche, whatever it may be, at Diamond Drug.

“If you hear any yelling or crashing noises in the background that is just the prisoners. Don’t mind them.”

