

Pharmacy Careers

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VIEWPOINTS

Giving Back Through
Teaching, Patient Care:
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Clinical Faculty Member

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Pharmacy Students
Report Both Motivators,
Barriers to Attending Class
Pre- and Post Pandemic

SCHOOL VOICES

Black Resilience in
the Face of Indifference
Is Vital to the Future of
Pharmacy Education

Pharmacy Careers®

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Pharmacy Students Have Myriad Opportunities to Tackle Health Disparities, Social Issues

MIKE HENNESSY SR, CHAIRMAN & FOUNDER, MJH LIFE SCIENCES™

THE PAST 2 YEARS HAVE been filled with social upheaval, and as trusted community members, pharmacists have stepped up to meet these challenges. While handling the ongoing stress of the COVID-19 pandemic, pharmacy school faculty members, administrators, and students have found unique ways to also address social determinants of health and disparities both in curricula and in the daily hands-on work of pharmacy.

Social determinants of health propose that the conditions in which people live, work, learn, and play can directly affect their health risks and outcomes. As community members living in the same neighborhoods as their patients, pharmacists are well positioned to address these issues. By asking patients about housing stability, food access, or mental health concerns, pharmacists can learn more about their patients and provide more holistic, patient-centered care.

In this issue of *Pharmacy Careers*®, we feature pharmacy students and faculty members who are tackling social disparities in health care and their impact on patient health.

At the University of Minnesota College of Pharmacy, students and faculty members have created affinity groups to provide space for people with shared identities and backgrounds to connect. In a Student Voices article, Leyla Rashid, a PharmD candidate, said these groups provided essential spaces to gather during the social upheaval of the summer of 2020.

Disparities in health care have also been frequent topics at various conferences, and a feature article reviews one such session at the American Association of

College of Pharmacy 2021 Virtual Meeting, titled “Teaching On Half the Story: The Case of Systemic Racism.” In the session, experts reviewed survey results that found teaching on systemic racism is a low priority in pharmacy curricula, although that may be changing.

Pharmacists and pharmacy students are also turning to social media to connect with others in the field while raising awareness about issues they are passionate about. A feature article by Nyrah Saleem, PharmD, discusses how pharmacy students can use various platforms to advocate for provide status and increased public awareness of the profession.

Similarly, a new series on social media pharmacy “influencers” features several pharmacists popular on TikTok, several of whom said they use the app to tackle COVID-19 misinformation. Social media literacy will certainly be an essential skill for pharmacists in the future, both to connect with other health care professionals and to educate patients.

Students are also active on the issue of environmental sustainability. In a feature article, Ashley Lam, a PharmD candidate at the University of Charleston School of Pharmacy, reviews how closely related health care and the environment can be, as well as ways that students can tackle environmental issues while pursuing their studies.

We hope you enjoy reading these and other stories in this issue of *Pharmacy Careers*® and gain insight into how the next generation of pharmacists are poised to handle the challenges of a changing health care and societal landscape.

Thank you for reading!

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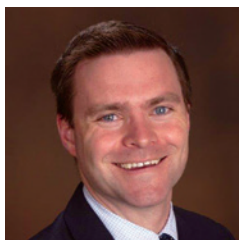




There Has Never Been a Better Time to Be a Pharmacy Learner

Service opportunities and increasing demand for a highly skilled workforce are driving innovation.

By TROY TRYGSTAD, PHARM.D, PH.D, MBA, *PHARMACY TIMES*® EDITOR-IN-CHIEF



PANDEMIC-RELATED OPPORTUNITIES ABOUND

COVID-19 booster shots are here, and along with them are administration opportunities for influenza, pneumococcal, and other vaccines. Testing is back in full force, with a need to cover COVID-19 as well as influenza and strep as we near the “cough and cold” season. At least 1 state (Arkansas) has now authorized pharmacists to prescribe and administer monoclonal antibodies to treat COVID-19 early in the community, and this can be added to the ever-growing “test and treat” services, with authorizations percolating across the country.

Beyond the pandemic but related to the public’s new realization of pharmacy as an untapped access point for screenings, referrals, and medication therapy management services, there are hemoglobin A1C, mm Hg, and other clinical measure-related, value-based contracting opportunities sprouting everywhere.

SERVICE DELIVERY REQUIRES ADDING ROLES TO THE COMMUNITY PHARMACY PRACTICES

Community pharmacy generates billions of prescriptions each year, and the mechanics of the supply chain movement, prescribing, and filling of medications is remarkably efficient. However, therapies for patients often remain ill coordinated and suboptimal regarding the proper selection of drugs for various conditions, potential drug-drug interactions, and the administration of the drug by a health care professional or the patient. With the advent of new services—including delivery models for optimizing medication use as well as screening, testing, and vaccinating—pharmacies are accessible and willing service providers but often have not made the infrastructure changes necessary to accommodate such developments.

Services generally require that appointments are both efficient and effective, and call for different documentation for both bill-

ing and effective longitudinal care delivery. New services also require workflows and processes that dispensing does not, and challenges can include different billing requirements and more prevalent no-shows. These services also tend to require more preparation to be ready to serve the patient.

Additionally, services such as dispensing require nonpharmacist staff to engage the patient prior to the visit, prepare for the visit itself, and communicate follow-up instructions. In the instance of vaccinations and testing, nonpharmacist staff also frequently provide the actual service delivery under a pharmacist's supervision. These are all tasks that pharmacy learners (students, fellows, residents, and others) can learn while developing or improving the pharmacy's overall efficient and effective delivery.

PRACTICE MANAGEMENT

To run a successful services-based pharmacy, observing a physician practice can be instructive. First, all practices have a practice management system where patients are scheduled, prereened, and billed for medical services. Pharmacies are beginning to adopt physicianlike practice technology solutions, such as online scheduling, booking staff devoted to service delivery alongside those schedules, and learning the ins and outs of non-dispensing-related services billing. Nearly every physician practice has an office manager for a reason.

PATIENT ENGAGEMENT

As with dispensing, interactive voice response and other outreach and follow-up technologies have been adopted in physician clinics. Yet pharmacy has even greater opportunities to engage the patient since they are the most frequented setting of care. Having a screening system both in the pharmacy and with delivery or courier services is a next-level pharmacy capability. Which patients are at risk for low adherence? Which patients screened for high blood pressure do not have a primary care physician? Which patients need depression screening? Which patients have been discharged recently and need medication reconciliation? Which patients need home delivery? Video look-ins for the pharmacist when patients are at home also present many opportunities. Finally, when patients are identified for all these services, who is responsible for the patient experience, scripting of messaging, and coaching of staff?

APPOINTMENT-BASED MODEL

Effective and efficient services are impossible without the appointment-based model, even if those services are based on screening and acute intervention. The walk-up model of pharmacy workflow remains necessary but is outmoded by new dual "front of house" and "back of house" workflows. Front of house workflows cater to the transient patient who makes an unplanned visit or has little fidelity or patronage to the pharmacy. "Back of house" workflows cater to the patient with a longtime relationship with the pharmacy who now has the ability to walk in for services when needed but also has access to scheduling and dispensing services, in addition to specific pharmacist practitioners as a "patient of the practice." Who is responsible for setting up and making improvements to this "back of house" workflow? Has the pharmacy synchronized medications yet? Can they add more patients to the synchronizing services? Are those appointments connected to the online scheduler and public website? What additional services is the patient eligible for, served by, and billed for when they pick up their medications?

BECOMING A "POSITIVE DEVIANT"—GOOD FOR YOUR RESUME, EVEN BETTER FOR THE SOUL

Today's pharmacy learners have the chance to see and participate in multiple settings of care and multiple versions of those settings. In the thousands of community pharmacies across the country, the pandemic has catalyzed and amplified the adoption of services and workflows previously left to the leaders and luminaries of the profession. Now these services and workflows are becoming more mainstream. However, most pharmacy personnel have yet to participate in such activities and workflows. This gives pharmacy learners the opportunity to be that "positive deviant"—learning established practice staples necessary for safe, efficient, and effective dispensing, while also helping to implement new best practices related to service delivery. ■

ABOUT THE AUTHOR

TROY TRYGSTAD, PHARM.D., PH.D., MBA, is vice president of pharmacy and provider partnerships for Community Care of North Carolina, which works collaboratively with more than 2000 medical practices to serve more than 1.6 million patients who are on Medicaid, Medicare, commercially insured, or uninsured. He received his PharmD and MBA degrees from Drake University and a PhD in pharmaceutical outcomes and policy from the University of North Carolina. He also serves on the board of directors for the American Pharmacists Association Foundation and the Pharmacy Quality Alliance.



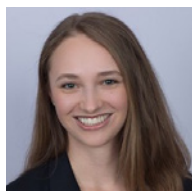
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Providing Patient Care in a Community Pharmacy Career

By SOPHIA HERBERT, PHARM.D



SOPHIA HERBERT,
PHARM.D

THE COVID-19 PANDEMIC HAS CHANGED the way the public seeks health care. For example, it has highlighted the value of community pharmacies as a location where health care professionals can provide vaccinations, testing, and medication-related care, in addition to triage or other health care services.

Community pharmacy practice is experiencing a critical transformation that will modify the way pharmacy professionals and the public think of the community pharmacist's role. Many factors are coinciding to set up community pharmacy for an exciting evolution that will continue to grow in the coming years.

The business model of health care is rapidly changing as communities need their local pharmacies to meet gaps in care. Meanwhile, pharmacy technology has expanded to allow community pharmacists to better document patient care and outcomes.

The COVID-19 pandemic has created new opportunities for pharmacists in community pharmacies to provide care and express value to other members of the health care system in the United States. Community pharmacists, pharmacy faculty, and student pharmacists are all taking part in practice transformation, making it an exciting time to explore community pharmacy as a career.

Declining margins on medication dispensing are a well-known topic in community pharmacy. Although gross margins of pharmacies have decreased over the past several

years, provision of additional patient care services have grown significantly.¹ This provides additional revenue to community pharmacies while allowing the pharmacy team to put their focus toward providing patient care over time.²

There is also a growing shortage of primary care physicians in the United States, which is expected to more than double between 2017 and 2032.² This shortage heightens the need for pharmacists in the community to step into primary care and chronic disease management roles.³

Pharmacists are trained as clinicians, and their incorporation into chronic disease management efforts has a positive impact on clinical outcomes and return on investment.³ There are critical gaps in health care that pharmacists in the community can meet with their accessibility and skill sets.⁴

Provision of enhanced patient care services has grown significantly over the past 2 decades, including milestones of Medicare Part D Medication Therapy Management Programs (MTMPs) in 2006, allowance in all 50 states for pharmacists to immunize by 2015, and the growing recognition of pharmacists as health providers within 18 states, with additional states having pending legislation.^{4,5}

Importantly, pharmacists in communities are being increasingly compensated for the patient care they provide. This is happening with opportunities like MTMPs and negotiated payer programs through clinically integrated networks of pharmacies, such as Community Pharmacy Enhanced Services Network (CPESN) USA and their state affiliates.^{6,7}

Many of these new and expanding payer programs utilize the Pharmacist eCare Plan technology standard for

documentation of care.^{7,8} The eCare plan is a community pharmacy electronic health record that allows for more robust documentation of care provided over time beyond prescription dispensing and supports adjudication of payment for services.⁸

The COVID-19 pandemic has accelerated community pharmacy practice transformation and has expanded patient care service provision even further. An example of this is the ability of student pharmacists across the nation to immunize the public with the COVID-19 vaccine, when, in many states, restrictions prevented this less than a year ago.⁹

Additionally, community pharmacies have been able to offer COVID-19 testing, other point-of-care tests, and essential services while many other destinations for health care had to close their doors during lockdowns. All these changes have resulted in both patients and other providers viewing the role of community pharmacists differently. Patients have always put great trust in their pharmacists, but their view of what pharmacists can provide is growing.¹⁰

It is an exciting time in the world of community pharmacy practice. Community pharmacists are getting paid for patient care now more than ever, and new doors are opening daily for pharmacists to make a positive impact on the health of their patients.^{6,11} CPESN USA now includes over 3000 pharmacies nationwide, all of which are united by providing enhanced patient care services.

Growing patient care programs and transforming workflow come with challenges, and the Flip the Pharmacy program has made great strides toward supporting pharmacies in their change efforts.¹² As pharmacies have united to work toward transformation, colleges and schools of pharmacy have also come together to mobilize community pharmacy practice transformation efforts.

In 2019, the Academia-CPESN Transformation (ACT) Pharmacy Collaborative formed as a learning and acting collaborative between colleges, schools of pharmacy, and clinically integrated networks of community pharmacies.¹³ The goal of the collaborative is to support the transformation of community-based pharmacy practice from a product-based care model to a community-based pharmacy care delivery model.

To date, the ACT Pharmacy Collaborative has 93 colleges and schools of pharmacy in its membership, each with an ACT Champion designee who serves as a liaison for efforts at the college/school surrounding community pharmacy practice transformation.¹³

ACT Champions and their teams strive to advance community practice and promote it as a promising career for

student pharmacists through education, research, and connection to community pharmacy practices. The network of faculty, staff, and students that has formed through the ACT Pharmacy Collaborative has fostered meaningful connections and opportunities to get involved in community pharmacy practice transformation.

Students are powerful change agents; a student adds a lot of value to community pharmacies as they transform their practices. Don't be afraid to do your part to support community pharmacy practice transformation and to take your first steps in the exciting career path of community pharmacy practice. ■

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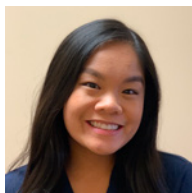
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Considerations for Environmentally Conscious Pharmacy Students

By ASHLEY LAM, PHARMD CANDIDATE; LADEN KARIM-NEJAD, PHARMD CANDIDATE; SAMUEL SCHAUER, PHARMD CANDIDATE; AND AMIR SABA, PHARMD CANDIDATE



ASHLEY LAM,
PHARMD CANDIDATE

MANY HEALTH CARE WORKERS STRUGGLE to understand the connection between health care and the environment, even though these entities affect each other in a reciprocal manner. Environmental conditions, such as severe weather, contaminated water supplies, and air pollution, affect

health by causing injuries and fatalities, exacerbating respiratory and cardiovascular diseases, and spreading infectious diseases, such as cholera and cryptosporidiosis.¹ In turn, health care can also affect the environment in cases of improper disposal of pharmaceutical waste, manufacturing and supply chain issues, and pollution from health care systems.

Recent research confirms the presence of pharmaceuticals in locations that extend beyond its intended use by patients or in the health care setting. For example, a 2014 Environmental Protection Agency water study measured municipal wastewater effluent from 50 health care facilities serving 46 million people and detected hydrochlorothiazide in every sample. Valsartan was found at the highest concentration, and lisinopril was found at concentrations that could produce 1 dose annually.² Moreover, in 2014, 7.9% of the total national carbon footprint was attributable to health care.³

As more data emerge showing how closely health care and the environment are intertwined, the roles of pharmacists and pharmacy students continue to be explored and defined. Although the climate crisis can feel overwhelming, it can be comforting to remember that no effort, regardless of size, goes to waste.

Tackling environmental issues can feel particularly

paralyzing for students, given the numerous responsibilities that accompany school. For new graduates, stepping into new roles as pharmacists while striving to protect the environment can be intimidating and isolating. However, making environmental health a part of standard practice within the pharmacy can begin with just a few action steps.

GOING GREEN DURING PHARMACY SCHOOL

Equip yourself with knowledge

Attending conferences can help support exposure to knowledge and ideas on how to make an impact. For example, the annual CleanMed Conference provides attendees with the opportunity to network and learn from experts about sustainable health care and environmental protection.⁴

Share your mission

Student-led initiatives that invite discussion about the intersections of health care and the environment are an important step to identifying gaps in education. Asking peers and professionals both within and outside pharmacy about their ideas, ways to collaborate, and strategies to implement sustainability into practice can foster growth and make change approachable.

For example, the Planetary Health Report Card initiative is implemented by medical students to encourage medical schools to incorporate sustainable health care education while measuring each medical school's "green" score. Advocating for environmental factors to be taken into consideration during the clinical decision-making process is critical because of the many links between patients' health and the environment.

Growing sustainable leaders

Joining student organizations and professional organizations can help maintain motivation in sustainability efforts and support the free exchange of ideas.

For example, the Sustainable Pharmacy Project, originating from Virginia Commonwealth University School of Pharmacy, provides opportunities for pharmacy students to connect, collaborate, and hold events that inspire future pharmacists to lead efforts to reduce pharmaceutical waste. Additionally, Rx For Climate is a web-based organization focused on empowering pharmacists to make sustainable decisions and enforce the idea that pharmacists have an important role in the fight against climate change.

STAYING GREEN POST PHARMACY SCHOOL

Promote sustainable prescribing

As practicing pharmacists, opportunities to promote sustainability are numerous and diverse, and educating other health care practitioners has always been central to the pharmacist's role. Although this has traditionally been limited to education on optimal therapeutic use of medications, it is not unrealistic to extend this scope to include guidance on therapy that considers environmental impact as well.

For example, anesthetic gases used during surgery exhibit a profound greenhouse effect, yet there are less impactful alternatives available that do not compromise patient safety. In a 2019 study, pharmacists were found to be key in implementing these alternatives and reducing their use at the University of Wisconsin, resulting in a 64% per-case reduction in carbon dioxide equivalent emissions.⁵

Furthermore, pharmacists are aware that dry powder inhalers are the environmentally friendly choice among inhaler options because of metered dose inhalers' higher carbon footprint.⁶ As medication experts, pharmacists can make suggestions like this regarding the safer choice of a medication for the environment as well as for the patient while also helping to write protocols and educate other clinicians on how to make these environmentally conscious choices and balance patient needs.

There are also databases available like Janusinfo, which categorizes the environmental hazards of different medications, allowing pharmacists to compare the environmental risks involved with prescribing a given medication. In this way, just as cost, availability, and patient preference may shape prescribing patterns, environmental harm should be among the factors that guide medication utilization.⁷

Pharmacists are also well positioned to support sustainability on a systems level. Because they are heavily involved

in the selection, procurement, distribution, and utilization of medications in hospitals and other settings, they can work to reduce the impact on environmental systems by making environmental sustainability a consideration during these processes to support patient health.

Empower your patients

Pharmacists can promote their institutions' medication disposal services and play an active role in reducing improper medication disposal. In a 2016 study, the most common method of household disposal of unused medications among 18,008 participants globally was the garbage.⁸ Proper disposal of medications is a simple and effective method that minimizes harm to ecological systems.

Pharmacists should continue to instruct patients on how to utilize medication disposal programs rather than flushing or pouring medications down the drain. Equipping patients with knowledge of these services empowers them to take an active role in keeping their environments safe and healthy.⁹

Look further upstream

There is also room for pharmacists to promote sustainability even further upstream within the pharmaceutical industry and drug development. A growing area of interest in pharmaceuticals is utilizing green chemistry principles for new drug synthesis and implementing "benign-by-design" drug manufacturing (ie, medications that biodegrade into benign components rather than environmentally harmful pollutants) to lessen the impact of medications that reach the environment.¹⁰

Opportunities for pharmacy students and pharmacists to positively affect the environment are endless. From attending environmentally centered conferences as a student pharmacist to creating benign-by-design medications as a pharmacist, no effort is too small. Through collective action, students can make a difference.¹¹

There is still a lot that remains unknown about the symbiotic relationship between pharmacy and the environment, but 1 truth remains: Health care providers play a pivotal role in affecting the climate crisis, whether through action or inaction.

To find a pharmacy offering medication disposal services near you, visit <https://safe.pharmacy/drug-disposal/> and provide your zip code.

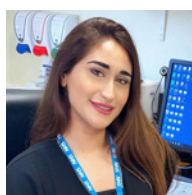
To hear more about the ways in which environmental conditions affect patient health, visit <https://www.pharmacy-times.com/view/webcast-the-impact-of-environmental-conditions-on-patient-health>. ■

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Social Media Has the Power to Revolutionize the Scope of the Pharmacist's Impact in Health Care

By NYRAH SALEEM, PHARM.D



NYRAH SALEEM,
PHARM.D

SOCIAL MEDIA HAS REVOLUTIONIZED THE way health care professionals and patients interact with each other. It provides powerful tools to allow health care professionals to actively engage with their patients and address common misconceptions about health care news online.

With COVID-19 hitting the nation and more individuals connected to their laptop and phone screens than ever before, now is the time for pharmacists to take action and modernize their approach to educating the public through the use of social media.

Why Use Social Media?

The global rise of social media platforms such as TikTok and Instagram has demonstrated how influencers who effectively use these platforms to disseminate information can significantly impact the public's views on health. They can also provide a platform for patients to openly express how they feel without the fear of being judged.

In this way, social media can influence patients' decisions on their health. This has particularly come into view in recent years in relation to vaccinations, as social media has been shown to have a powerful impact on people's decisions around whether to get vaccinated against COVID-19.

When I joined TikTok—which is currently the fastest growing social media platform—I was able to not only counsel viewers on common ailments that can be treated with over-the-counter (OTC) treatments, but also address misleading myths about COVID-19 vaccines.

As a pharmacist, our role is to educate patients on their medication, treat patients holistically, and address their concerns surrounding their overall health care. During busy work hours, it can be difficult to provide extra one-on-one time with the public to counsel them on health decisions, which makes social media a perfect outlet for this endeavor.

Social media provides pharmacists with a platform to voice their professional opinion and offer accurate health care advice to a large swath of people worldwide. It also allows patients to refer back to this medical information as needed.

With packed schedules and increased demands, the pressures of the job are also increasing for physicians. With added responsibilities, pharmacy professionals have the opportunity to step in to educate the public on minor health conditions, which can be easily treated with the correct over-the-counter remedies. This approach can inevitably decrease the need for appointments with a physician and, in turn, decrease the physicians' workload as well.

How to Network Using Social Media

Social media has become an integral part of daily life for much of the world, allowing it to be used not only as an effective tool for educating patients, but also as a tool for pharmacists and pharmacy technicians who may be looking to collaborate with colleagues within the industry.

The opportunity for discussion and connection through social media also provides health care professionals with the ability to learn from other experts in the field and expose themselves to new professional opportunities, such as by increasing the likelihood of being recognized or contacted by potential future employers.

LinkedIn has been a crucial part of my ability to succeed in my field. Being able to network with like-minded individuals and agents in the pharmacy world allowed me to secure my desired role as a clinical pharmacist within primary care.

Social networks on platforms such as LinkedIn can offer the opportunity to represent oneself professionally and showcase skills and achievements for future employers. Additionally, connecting with colleagues can help professionals stay up-to-date on the latest industry information, keep in touch with peers who could send referrals, and position themselves as a primary contact in the industry.

Best Practices for Pharmacists on Social Media

All pharmacy professionals are expected to use good clinical judgement and behave professionally on social media. This includes maintaining clear professional boundaries with patients and considering the context of anything posted online within a broader social framework.

It is important to remember while using social media that anything written on these platforms can be copied or reposted without providing context about the original intent of the post. In this way, posts written by pharmacists on social media can be negatively skewed through reposts, which makes it necessary to consider the possibility of this occurring when posting something that could be—out of its original context—perceived in a different light.

“Social media has become an integral part of daily life.”

Tips for Growth on Social Media

The most successful way to grow on social media involves stepping outside of one's comfort zone and not being afraid to voice opinions on topics that matter, especially topics that are trending.

However, to positively influence the conversation, actively engaging and responding to questions in an informed manner can help to effectively build an audience's interest and engagement. Although it's not necessary to have an answer for every question, it can be helpful to use new and unfamiliar topics that may not be immediately answerable as a guide to direct future posts and discussions.

When drafting content ideas, it is beneficial to ensure the shared information is evidence-based and valid. Additionally, I learned in my own social media journey that instead of just focusing on gathering followers, focusing on creating consistent content provides greater value to my audience, which brings more interest and engagement to the information that I share.

It is also important to understand that other professionals in different industries may have a different perspective on trending topics, and patients themselves may also have a different take on topics based on how that issue has impacted their lives. This can lead to being confronted with conflicting views that can challenge ideas that some may have previously taken for granted.

Lastly, social media can provide an avenue for self-expression. It is possible to remain professional while expressing one's own personality and individual voice. Social media provides the opportunity for pharmacists to show the public that they bring a lot more to the counter than just medication. Now is the time to utilize social media as a resource that will take pharmacy professionals, and the profession itself, to new heights. ■



Seeking Employment Outside Pharmacy: A Potential Path Forward in a Saturated Market

By SKYLAR KENNEY, ASSISTANT EDITOR

AS THE NUMBER OF PHARMACY schools and pharmacy graduates continues to grow,¹ it becomes increasingly difficult for those with pharmaceutical education to find jobs in their chosen field, and many may feel they need to look elsewhere to utilize the skills they learned as students.

During a session at the American Association of Colleges of Pharmacy 2021 Annual Meeting titled “Will My Students Have a Job After Graduation? Providing ‘Outside the Box’ Workforce Solutions,” Sharon Park, PharmD, MEd, BCPS, associate professor of clinical and administrative sciences and assistant dean of academic affairs at the Notre Dame of Maryland University School of Pharmacy, explained there are alternative employment opportunities for pharmacists outside the pharmacy.²

“Currently, there’s a saturation of the job market for community pharmacy positions, and we know that an employer-driven job market such as this will have pharmacists working more with static or stagnant salaries,” Park said. “We [now] have over 140 pharmacy schools in the country, which also increases competition for pharmacist positions.”²

The number of pharmacy graduates is quickly outpacing

the demand for pharmacists; a 2007 projection forecasted a total of 304,986 pharmacists in the workforce by 2020.¹ According to 2016 Bureau of Labor Statistics occupational data, that number was hit 4 years early. Those same analysts found that pharmacists were remaining in the workforce longer and that pharmacy education continued to grow, with an increasing number of accredited pharmacy schools and pharmacy students.¹

There is also the problem of pharmacists being trained for roles that are not yet available. Foreseeing a future where pharmacists will take on a considerable patient care focus, the pharmacy school curriculum has placed a focus on preparing students for that role. However, according to the Pharmacy Workforce Center in 2014, full-time pharmacists devoted only 21% of their time to patient care services.

Furthermore, the percentage of pharmacists working in either a retail trade position or a hospital position is not expected to shift considerably between 2016 and 2026. In 2016, retail trade positions represented 60.4% of the pharmacy workforce and hospital positions represented 24.8%. By

2026, these percentages are expected to be 59.5% and 25.0%, respectively. This could ultimately lead pharmacy students to look for employment outside the pharmacy sphere to fully utilize their skill set.²

“It is also, in part, personally driven,” Park said. “Graduates who may want to pursue a position that is more creative and unconventional than the typical community or hospital-based pharmacy positions—they may find their positions are not adequately allowing them to explore and use all of their skills learned in pharmacy school, such as providing pharmacotherapeutic consultations.”²

Although the available roles in pharmacy have remained largely static, this does not mean that the roles available to those who graduate from schools of pharmacy are limited.¹ As Park explained, most of the skills taught to pharmacy students are broadly applicable to other fields, and graduates seeking employment can search outside the anticipated roles for a pharmaceutical student.²

“Based on our findings, there is a certain set of skills that all employers require or expect their employees to have, no matter the profession,” Park said. “These include communication skills, understanding economics, negotiation skills, leadership, emotional intelligence, networking, time management, problem solving, teamwork, adaptability, and the list goes on. These are what is considered, based on a *Harvard Business Review*...the key ingredients for how [employers] choose their employees, and these commonly sought-after skills by employers are also taught in pharmacy programs as part of their curriculum.”²

Although there are several potential avenues of employment outside pharmacy for individuals graduating from pharmacy school, Park provided a list of common alternative employment options for pharmacy graduates, including the following²:

- Consulting
- Medical writing or medical journalism
- Pharmaceutical research
- Online content creation
- Drug development
- Federal and local government positions
- Nonprofit organizations

“There is a certain set of skills all employers expect their employees to have.”

- Informatics positions
- Formulary management
- Education
- Public health and emergency preparedness
- Pharmacogenomics
- Veterinary pharmacy
- Substance use or mental health-specific positions

Although there are many reasons to seek employment outside the field of pharmacy, there is also an expectation that change is coming soon. Congress could soon grant provider status to pharmacists under certain conditions, which could fundamentally change the role of a pharmacist and begin to develop a foundation for a future of patient-centered pharmacy practice. In turn, this could increase demand for employees in these roles.¹

“The profession is really changing, not to mention the rise of the personalized medicine concept,” Park said. “The sky’s the limit in terms of how and what pharmacists can contribute to, and we have a certain population that is growing, and their needs are actually not met. We have to think a little more proactively for these patient populations and how to reach them.”² ■

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Pharmacy Students Can Leverage Their Passions Into Their Careers

By KELSEY SCHMUHL, PHARM.D



KELSEY SCHMUHL,
PHARM.D

AS AN UNDERGRADUATE STUDENT AT the Ohio State University studying pharmaceutical sciences, I was not aware of the impact that substance misuse was having on my community until I sat through a lecture that changed my perspective. In that lecture, I learned that more people were dying every day

in Ohio from accidental overdoses than from car accidents. It was in this moment that I realized the importance of the pharmacist in combatting the opioid epidemic and preventing prescription drug misuse.

After class that day, my instructor informed me of a program called Generation Rx, which was founded at Ohio State's College of Pharmacy in 2007. The mission of the program is to educate people of all ages about safe medication practices and the potential dangers of misusing medications. Through working with Generation Rx as a student, I continued to develop my passions for caring for those with substance use disorders and teaching others about medication safety best practices.

This theme grew as I completed my doctor of pharmacy degree, residency training, and fellowship. I am grateful to say I have been able to turn these passions into a career as a faculty member. Each week, I have the opportunity to care for patients with substance use disorders through my clinical practice site, promote medication safety as a Generation Rx team member, and teach undergraduate students about the profession of pharmacy through the same course that inspired me as a student. I have found that the opportunities I had to explore my areas of interest as a pharmacy student have made a considerable impact on my current career, and as a faculty member, I aim to help future pharmacy students do the same.

As the opioid epidemic continues to be a major public health concern, it is more important than ever for pharmacists and pharmacy students to take an active role in combatting the issue. As the most accessible health care provider, pharmacists are uniquely poised to meet patients where they are in the community and provide meaningful education and interventions.

I encourage pharmacy students who wish to become more involved in medication misuse prevention efforts to learn more about Generation Rx. This program educates people of all ages about safe medication practices through evidence-based educational resources packaged as easy-to-use tool kits. All Generation Rx materials are turnkey and designed to provide everything a facilitator needs to hold a presentation or program. Facilitators can deliver these resources as student pharmacists through a short virtual or in-person educational presentation or program.

Generation Rx also supports facilitators through 2 approaches: including facilitator guides in each tool kit that contain instructions and talking points for delivering the resources, and providing a self-directed online training program called Generation Rx Ambassadors that supports facilitators who are working to develop the knowledge and skill set to appropriately implement Generation Rx education. As I reflect on my career as a student, involvement in Generation Rx allowed me to develop my communication and facilitation skills in addition to learning best practices in science education and prevention.

Another way student pharmacists can get involved is through advocacy efforts, as student voices are powerful and have the potential to make meaningful change. An advocacy issue I was passionate about as a student was increasing access to naloxone, the medication that can reverse an opioid

overdose. Through becoming an active member of my state pharmacy association, I was able to advocate for legislation that would expand access to naloxone in the state of Ohio. Now Ohio pharmacies can dispense naloxone to patients without a prescription under a physician protocol.

This experience allowed me to build my network and collaborate with others involved in this work around the state while also providing education about this lifesaving medication to students, pharmacists, and community members. If students are interested in learning more about advocacy and taking an active role in advocacy efforts, I encourage them to join their state pharmacy association to learn about legislation that is affecting pharmacy practice in their state.

These are just a few of the experiences that I had as a student that helped shaped my career. If I had not taken the opportunities available to me to become involved and expand my professional network as a student, I do not believe I would have the opportunities I have today.

My advice for student pharmacists would be to take time to think about the areas of pharmacy that they are most passionate about and form a personal mission statement around these areas of interest. With that mission in mind, students can strategically build their network, become involved in relevant projects or organizations, and ultimately build a story that will help shape a career they are excited about every day. ■

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Teaching Systemic Racism in Pharmacy Curriculum is Essential to Improving Health Equity

Medicine often conflates the social construct of race with biology and fails to address the health-related consequences of systemic racism, according to the presenters.

By AISLINN ANTRIM, ASSOCIATE EDITOR

ALTHOUGH SOME SCHOOLS INCLUDE TOPICS on systemic racism in individual classes, speakers at the American Association of Colleges of Pharmacy said it must be a central theme throughout pharmacy school curriculums to prepare students and improve health care access for all.

In the session, titled “Teaching on Half the Story: The Case of Systemic Racism,” several presenters discussed the findings from a survey of 7 pharmacy schools’ curriculums. They found that systemic racism is a low priority in pharmacy schools and is typically taught briefly in a single course for first- or second-year students.

The topic of systemic racism is complex and multifaceted, and includes policies, laws, rules, norms, and customs enacted by institutions, which advantage the majority population and disadvantage groups of color, according to presenter Edo-Abasi U. McGee, PharmD, BCPS, an assistant professor at the Philadelphia College of Osteopathic Medicine School of Pharmacy, Georgia campus. Systemic racism is also closely related to social determinants of health, although McGee emphasized that the former acts as a much broader umbrella and affects a greater range of issues.

“I think of systemic racism as a structural determinant of

health,” McGee said.

She also explained that race is a construct and that racism—not race—causes disparities. Furthermore, she said that medicine often conflates the social construct of race with biology and fails to address the health-related consequences of systemic racism. For example, McGee explained students are taught to tell patients to eat healthier foods and walk more, instead of addressing issues that may pertain to social determinants of health.

The failure to better educate health care professionals on these issues within the medical education system have very direct impacts on patients, McGee noted. For example, estimated glomerular filtration rate (eGFR) is calculated differently for Black patients because they are presumed to have higher muscle mass and creatinine generation rates than patients of other races. McGee explained that this differentiation in eGFR often results in delayed dialysis and transplant referrals for Black patients.

Another example is the different body mass index (BMI) risk calculation for Asian patients. Unlike patients of other races, who are considered at risk for diabetes if they have a BMI of 25 or higher, Asian patients are considered at risk

with a BMI of 23 or higher. Because of this, Asian patients are often screened for diabetes despite the absence of other risk factors, resulting in the potential for these patients to experience greater levels of distrust in medical providers.

By educating pharmacy students on systemic racism and these direct impact on patients, McGee explained that instructors can help future pharmacists connect the dots and work toward a greater level of equity in health care. In the wake of the national upheaval during the summer of 2020, McGee said many schools have begun changing their curricula to reflect new priorities.

To better understand if and how systemic racism is taught in pharmacy schools, a team of investigators conducted a survey at 7 institutions to evaluate how students are trained and educated on the subject. Presenter Hope Campbell, PharmD, BCPS, an associate professor at the Belmont University College of Pharmacy, said the pilot study was conducted in the spring of 2021, with participating schools including the Belmont University College of Pharmacy, the Pacific University School of Pharmacy, the Philadelphia College of Osteopathic Medicine Georgia Campus, the Roosevelt University College of Pharmacy, the Sullivan University College of Pharmacy and Health Sciences, the Wilkes University Nesbitt School of Pharmacy, and the University of Wyoming School of Pharmacy.

The survey contained 26 items covering 4 areas of interest: Demographics and program design, where systemic racism is taught in the curriculum, how systemic racism is taught in the programs, and barriers to teaching systemic racism. Program respondents included both 3- and 4-year programs.

All of the survey participants said the priority to explicitly teach about systemic racism was “low” or “extremely low,” according to presenter Marina Suzuki, PharmD, PhD, BCPS, BCACP, associate professor at the Pacific University School of Pharmacy. However, she noted that these answers were based on the 2020-2021 academic year, so they may not reflect new revisions.

Two respondents said systemic racism education is not offered at their institution; 3 said it was offered in a single course or module; and 2 respondents said it was offered in more than 1 course or module but without an overall theme throughout the school curriculum. Additionally, topics surrounding systemic racism were usually taught during the first didactic year, although 1 institution said it was taught in Advanced Pharmacy Practice Experiences (APPEs) and 4 said it was taught in co-curricular programs such as interprofessional case study activities.

The survey responses showed that a wide array of topics related to systemic racism were taught in the curriculums, including antiracism, cultural proficiency and health beliefs, historical abuses, implicit bias, lack of inclusion or partici-

“Instructors can help future pharmacists connect the dots and work toward a greater level of equity in health care.”

pation in clinical trials, microaggressions, minority stress, racism as a social determinant, racism in health care, and diversity, equity, and inclusion. The presenters noted that the topics were taught within pharmacy schools using adaptive learning strategies such as cultural simulation games, case studies, reflective writing, and role play exercises. To assess student retention of the information, instructors used various assessment strategies, with writing reflections being the most common.

Finally, the survey asked about barriers to teaching systemic racism in pharmacy schools. The most frequent answers said that experiential roles did not exist for students to effectively learn about the topic, that there was not enough space in the curriculum, and that faculty were not comfortable teaching systemic racism. Most respondents did not believe that general resistance, concern for student acceptance of the topic, or support from administration were barriers.

Additionally, Suzuki explained that although most student responses expressed the importance of teaching systemic racism in pharmacy curricula, other student responses specifically noted the need for education on how to respond to racist comments from patients and the need to educate peers regarding the experiences of pharmacists of color in the field.

Most of the institutions said they plan to increase learning opportunities surrounding systemic racism over the next 1 to 5 years, although McGee questioned if this was enough.

“Ultimately, the question is, ‘Are we, as educators, ensuring our graduates are connecting the dots to truly diminish the inequities in access?’” McGee said. “To truly do that, we really must confront systemic racism in pharmacy education, to ensure [that] our learners are able to uphold the professional oath which we take as pharmacists to advocate for all patients. And until we can help them connect that dot, that’s the only way they’ll be able to truly mitigate health care inequalities.” ■



Factors Important to Underrepresented Minorities When Selecting a Pharmacy School

By JILL MURPHY, ASSOCIATE EDITOR

EDUCATIONAL PROGRAMMING AND DIVERSITY IN students and faculty are crucial to underrepresented minority (URM) populations, according to a session at the American Association of Colleges of Pharmacy Virtual Pharmacy Education 2021 conference.

Hope Campbell, PharmD, BCPS, associate professor of pharmacy practice at Belmont University, discussed her research on minorities and their selection of a school of pharmacy. As the pool is highly competitive, she encourages students to truly look at the main factors of the school they want to attend. Location, class size, student-to-faculty ratio, and a strong alumni network are some of the recommendations that Campbell highlighted as main points to look for in a program. For example, she emphasized the practice of going to a campus in person before finalizing a decision.

"You cannot underestimate the value of an actual visit to a campus, regardless of what you see online or read," Campbell said. "It's important to visit the program to get a real feel of what it is like to spend 4 to 6 years in a real institution."

In an electronic survey from fall 2019 of all first- and second-year pharmacy students at a private southern college of pharmacy (171), the results were analyzed as a whole and by race/ethnicity, according to Campbell. The profile of index schools further indicated that the schools were private and had a religious affiliation, a 4-year curriculum, and a relatively high cost of living. The factors that were assessed by these students included the following:

- Location
- Academics
- Diversity of the students/faculty
- Student Life
- Tuition

Of the 102 students who replied to the survey (at a 60% response rate), many were ranking reputation, academics, on-campus vibes, and the facilities as most important. Campbell took it further by comparing underrepresented minorities vs White students and Black students vs White students and their preferences.

For URMs, diversity of the student body, diversity of faculty, reputation for treatment of minorities, and cost of living were ranked as more important than how White students rated those factors. Additionally, Black students rated a diverse student and faculty population, reputation of treatment of minorities, and cost of living much higher than White students did. White students found facilities to be more important compared with how URMs/Black students ranked that category.

Campbell reiterated that the features that are most important to a student depend on whom you ask because there are some factors that you can control, such as the friendliness of the staff, and those you cannot, such as tuition.

"If we are trying to increase diversity within our student body, we need to ask students whether or not we are doing a good job," Campbell said. "There are some factors we can control, but there are things we need to compensate for if we cannot control them."

She explained how making adjustments, such as subsidizing the cost of living with scholarships, will help the recruitment process as an institution and can cater to the needs of a diverse student population based on their own personal data.

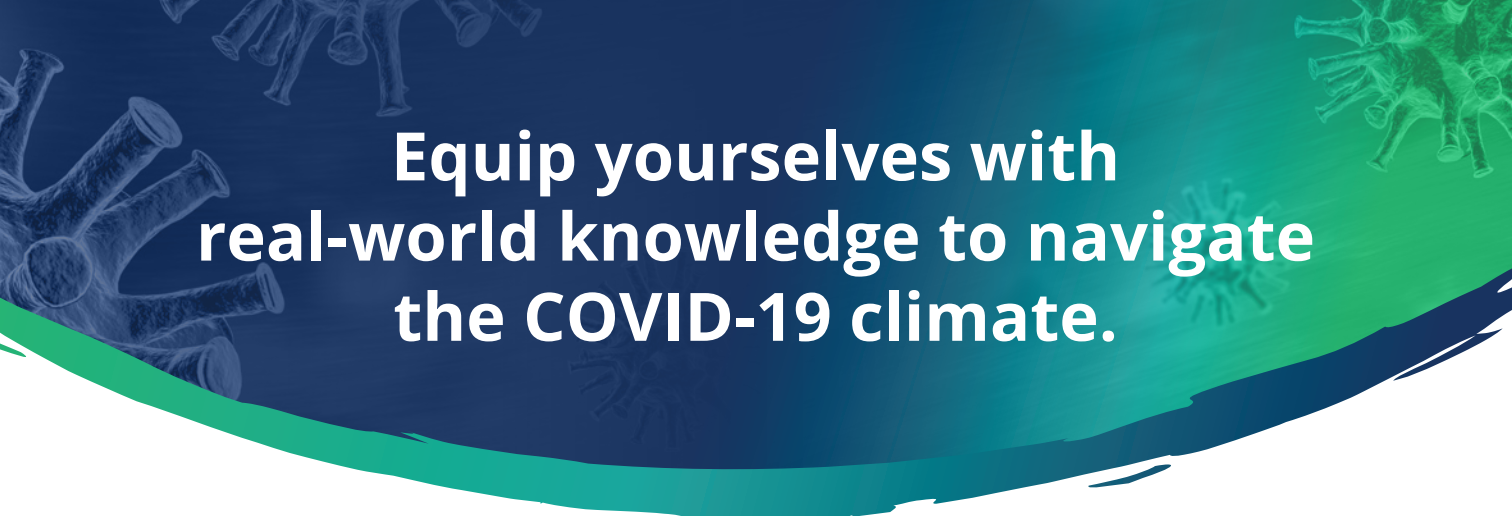
For a prospective student and the faculty, diversity has become the most important focus for having a reputable program.

"How you treat your students and minorities is important, and what is being said on social media matters because it is going to affect your ability to attract a diverse group of students," Campbell said.

She added that attracting individuals who may not have financial resources can start with providing incentive for their attendance, and a good interview process can lock them in or drive them away.

Campbell hopes to evaluate several schools from different regions of the country in the future, including a school-level assessment of recruitment efforts based on current data and evaluating URM student experiences while they are matriculating. ■

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The Career Connection Between Pharmacy and Toxicology

By ABIMBOLA FARINDE, PHD, PHARM D



ABIMBOLA FARINDE,
PHD, PHARM D

THE PHARMACY PROFESSION HAS A myriad of opportunities for advancement and a diverse array of career paths that anyone with a pharmaceutical education can pursue. Using the knowledge gathered through school and real-world experiences, pharmacists can easily transition from

one role to another.

One notable position that pharmacists can pursue is the role of a toxicologist. The extensive drug knowledge that pharmacists possess can increase their chances of success in the field of toxicology as well.

Some may have difficulty articulating exactly what toxicologists do day to day and how their work relates to medical and scientific fields. However, toxicology and pharmacy are similar disciplines that require individuals to have a deep understanding of the basic properties and mechanism of action of various chemicals. Both professions explore a mixture of therapeutic and adverse effects (AEs) of chemicals and drugs.

Although many people may be aware that toxicologists study and handle dangerous or toxic agents, the definition expands well beyond that focus. Toxicology also assesses the AEs of chemical and physical agents on living organ-

isms and seeks to manage and avoid injury from chemicals and radiation for these organisms.¹

Pharmacists are well positioned to move into the field of toxicology because there is a growing effort to increase awareness of the role of toxicologists by the general public and other disciplines. Like pharmacists, toxicologists strive to remain updated on the latest developments within their field, which involves working with advanced biotechnology to learn as much as possible about toxins at the molecular level.²

Under the umbrella of toxicology, a broad array of disciplines are covered. Given the range of effects that toxins can have, toxicologists may work in environmental groups, government and law agencies, regulatory bodies, research fields, academia, forensics, clinical environments, or independent corporations and laboratories.³ According to the Society of Toxicology, more than half of toxicologists work in toxicology-focused organizations, whereas 34% work in academia and 12% work in government.²

There are several toxicology-focused organizations for those who are interested in toxicology, including societies and academic institutions that provide valuable information on degree plans and opportunities after graduation. At the government level, toxicologists can help develop laws and regulations for the use of chemicals. On the other hand,

in academic settings, toxicologists can pursue professorships and conduct research in the field.

One of the most notable career paths for toxicologists is in forensics, where they can apply their knowledge to criminal or legal matters. The role of a forensic toxicologist involves evaluating several substances to find resolutions to crimes or to identify contaminants that can exist in the environment, food, or water supply.³

In the research arena, a toxicologist may partner with a pharmaceutical company to ensure that new agents are safe for testing when they are to be used in human clinical trials.⁴ Toxicologists can also work for the National Toxicology Program, overseeing the design of studies to develop controlled environments that mimic the exposures humans may encounter in any situation.⁴

In addition to becoming accredited in internal medicine and participating in acute or chronic medical tasks, toxicologists can also receive recognition and acknowledgment for their years of contribution to the field.¹ They can apply to obtain the designation of diplomate of the American Board of Toxicology by completing several tests that demonstrate their expertise in specific core competencies.

As toxicologists gain knowledge and experience in the field, they can also serve as experts who may be called

upon for guidance by others. Furthermore, toxicologists can affect the direction of health care through their study of toxins and toxicants and can protect public health by understanding which chemicals cause harm.

Pharmacists have an array of opportunities within the field of toxicology to explore. When it comes to choosing a specialty area for a pharmacy career path, in some ways, the options may seem limitless. However, toxicology remains a unique and ever-changing discipline that can offer a range of opportunities within its scope of practice, making it an ideal option for pharmacists interested in exploring multiple avenues within the field. ■

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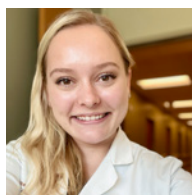
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Pharmacy Students Report Both Motivators, Barriers to Attending Class Pre-, Post-Pandemic

By CARA RUTLEDGE, PHARMD CANDIDATE



CARA RUTLEDGE,
PHARMD CANDIDATE

AT THE UNIVERSITY OF TEXAS at Austin College of Pharmacy, pharmacy students in academic years 1 through 3 face several barriers that hinder their motivation or ability to attend class. However, new technologies may provide novel learning opportunities to address these barriers.

With the introduction of a wider range of technology in classrooms, such as online access to recorded lectures, some experts have questioned whether these advances can hinder students' attendance and grade point averages (GPAs). This idea has been confirmed by a study of students in the Master of Pharmacy program at the Ulster University School of Pharmacy and Pharmaceutical Sciences. In this study, investigators observed that courses in which students were provided with recorded lectures had statistically significant rates of lower attendance.¹

On the other side of the debate, advocates argue that providing students with resources such as online recorded lec-

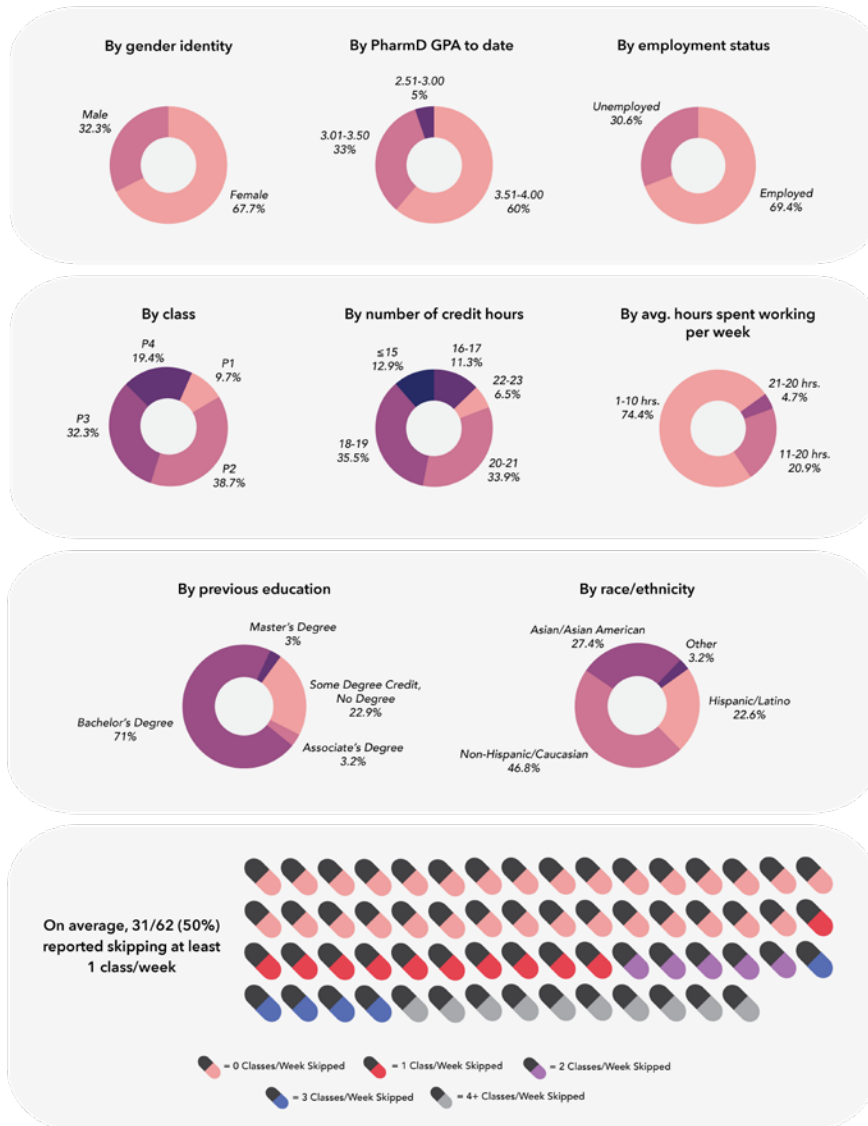
tures can provide a more learner-centered environment that can better appeal to students with dual-learning styles.² This tailored approach has shown positive feedback on "student's exam performance or on their learning, in general," according to the investigators. They also credited recorded lectures with "helping [students] study more efficiently."²

These seemingly contradictory findings pose the question: How important is student attendance when the end goal is mastery of the material? The emergence of the COVID-19 pandemic has reinvigorated the debate around this point, creating interesting and challenging circumstances for students and educators alike.

I studied this question in my honors program thesis in which I aimed to address the various complexities of student motivation, engagement, and attendance in relation to mastery of course material. My paper also touched on the impact COVID-19 has had on student engagement and understanding while learning remotely.

I used a qualitative mixed-method research approach to examine the major barriers and motivating factors.

FOR REFERENCES, GO TO [PHARMACYTIMES.COM/LINK/144](https://www.pharmacytimes.com/link/144).

FIGURE 1. Survey Participant Characteristics

The study was initiated in the fall of 2019 with a recruitment email containing the survey link that was sent to all enrolled student pharmacists in the PharmD program at The University of Texas at Austin College of Pharmacy. Following this email, a snowball sampling technique was utilized to recruit participants for the interviews. Additionally, voluntary semi-structured interviews were conducted in the fall of 2020 to obtain students' rationales for their survey responses.

The survey reached approximately 400 pharmacy students, 62 (15.5%) of whom completed it. **Figure 1** shows a breakdown of participants by various characteristics.

Respondents rated various motivators and barriers on a scale of 1 to 5, in which 1 was the most discouraging barrier and 5 was the most encouraging motivator.

The survey results found that the largest motivating factor to attend class was the instructor's teaching style, with an average rating of 4.52 out of 5. The most discouraging barrier was participants' work schedules, with an average rating of 2.84 out of 5. Mental health, unfinished course work, lack of sleep, the commute to class, the amount of lecture material being tested, and parking were also mentioned. **Figure 2** shows the Likert scale results, with 1 indicating a perceived barrier and 5 indicating a motivator.

Interviews were conducted with 15 volunteers, or 24% of the total survey respondents. **Table 1** visualizes codes and their respective frequencies, with higher code application counts indicating stronger significance. **Table 2** represents larger themes and their respective codes, calculated based on greater numbers of code applications.

Based on the results, the study shows that pharmacy students will take initiative to balance and prioritize their specific work, school, and life needs. Students understand the consequences of skipping classes, which can result in falling behind in the material to a point where grades may suffer.

So why do students continue to skip classes? The availability of recorded lectures might objectively make a student more likely to skip an in-person or synchronous class, but

a student's academic success in that class is maintained by interacting with course materials and using methods that better align to the student's learning style. Therefore in-class attendance is not mandatory to achieve success in a course because students are able to engage, ask questions, and learn the content in other ways.

Instructors should not be discouraged by these findings. A large majority of students interviewed said they made great efforts to attend their classes and noted experiencing benefits to attending classes in-person. Those students who reported that they were able to successfully attend class regularly said they do so because in-person attendance is how they best learn and engage with the material.

One way to potentially navigate this new information is to meet students where they are, in terms of their learning styles; this method can increase engagement and academic success in any course. In application, this may entail expanding instructor lecture styles in the in-person class setting to encompass more time-flexible and interactive or conversational activities, which can help facilitate learning based on the learning style of a student in class rather than outside of class.

Most interviewees reported that the COVID-19 pandemic and the resulting implementation of online-only classes drastically decreased their engagement in the course material while also resulting in mixed effects on academic performance. During the interviews, students either reported increased academic performance or decreased academic performance, suggesting that some students could still effectively learn in a virtual classroom setting. Those with learning styles that can harmonize with virtual content delivery were successful while students who best learn through in-person content delivery struggled.

During the COVID-19 pandemic, many unique efforts were made by the college, faculty, and students to address areas of need experienced by students while learning in a virtual environment. Students' perception of successful efforts included flexibility and understanding, transparent professor-student communication, virtual study groups, and task scheduling, such as blocking time using calendars or planners.

In addition to the impacts on students' academic careers, there has been debate regarding the lasting impacts of COVID-19 on physical places in which people work—with some positions that were historically in-person being permanently conducted online from home. Educators and students are not immune to this circulating theory. Because virtual learning is likely to remain—to some degree—once the world recovers from the COVID-19 pandemic, implementing a hybrid class model could potentially produce positive results for students, such as alleviating the time and commute burden that some students struggle with.

FIGURE 2. Likert Scale Results

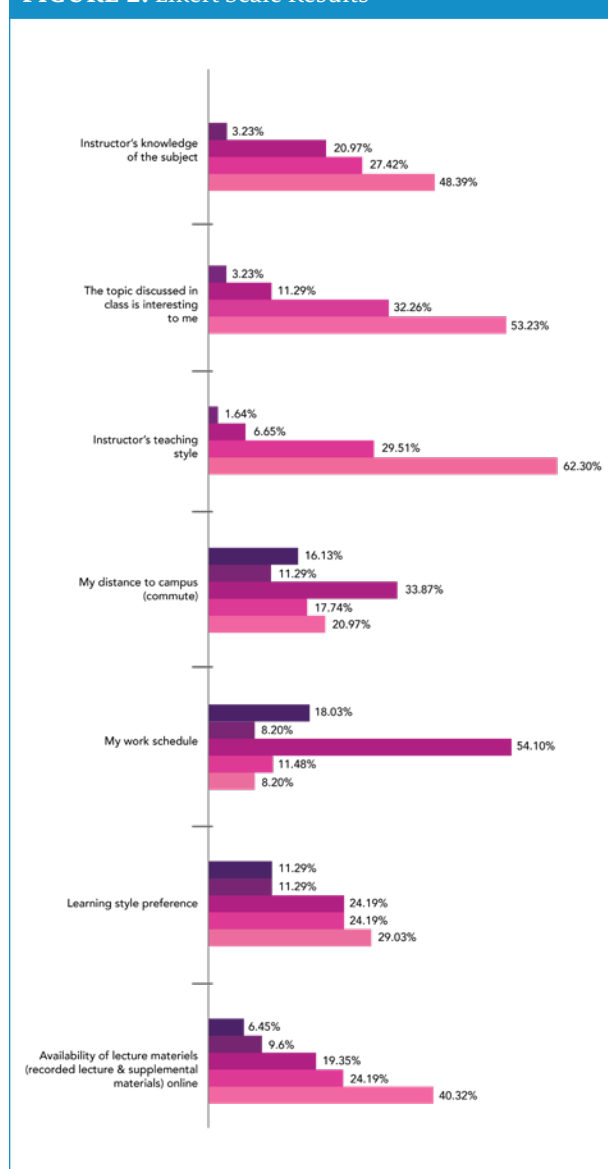


TABLE 1. Codes and Respective Frequencies

Codes	Code application count
Academic Performance	4
-Extra Credit	2
Availability of recorded lectures	37
-Attend class	12
-Indifference	7
-Skip class	14
Barriers to attendance	103
-Additional UTCOP requirements	12
-Attendance policy	12
-Child care	2
-Commute	20
-Distraction	7
-Getting ready	5
-Health status	14
-Mental health	8
-Physical health	5
-Lecture style	4
-Skip to study	12
-Transportation	8
-Weather	6
-Work	6
Class absence (negative impact)	32
Class absence (positive impact)	20
Content delivery	24
-100% in-person	10
-100% online	1
-Hybrid class model	15
COVID-19 2020 Impact	108
-Academic performance decreased	9
-Academic performance increased	14
-COVID had no effect on academic performance	4
-COVID had no effect on engagement	5
-Engagement decreased	21
-Engagement increased	0
Engagement	14
Exams	21
-Exam location	3
-Exam rules	6
-Exam schedule	1

Based on the study findings, the data demonstrated that routinely skipping class did not generally have a negative impact on students' mastery of course material, as evidenced by self-reported GPAs. Additionally, the benefits of recorded lectures were shown to outweigh the consequen-

es of skipping in-person classes as they provide students with more opportunities to engage with the course material. Looking to the future, better tailoring lectures to student's learning styles may help to facilitate academia's successful transition into the now pervasive hybrid learning model. ■

TABLE 2. Larger Themes and Respective Codes



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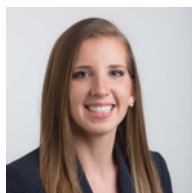


Giving Back Through Teaching, Patient Care: Pursuing a Career as a Clinical Faculty Member

By TAYLOR D. STEUBER, PHARMD, BCPS, MEREDITH L. HOWARD, PHARMD, BCPS



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DECIDING ON A CAREER PATH after completing pharmacy training can be one of the most difficult decisions of a professional's career. Students who seek advanced training through a residency or fellowship position are often enticed to do so to either practice in a clinical setting or conduct research. While completing this training, it is common to develop or realize an affinity for teaching or mentoring younger generations of pharmacy students and learners.¹ For those who realize this, a career in academia may be a fruitful venture.

Clinical faculty positions in academia can vary widely, but all generally consist of the primary responsibilities of teaching, service, and scholarship, also known as the academic triad. Teaching involves mentoring or fostering the future generation of pharmacy students in both the classroom (didactic) and clinical precepting (experiential) settings, whereas service

involves clinical practice responsibilities and committee and organization involvement, and scholarship involves research, grants, writing, and review activities.¹

Although most of the time in most clinical faculty positions is spent teaching, time spent in other areas may vary based on individual interests and experience.¹ Although challenging, a career in clinical pharmacy academia can be a rewarding experience, with some unique aspects and considerations.

TEACHING

Mentoring and teaching pharmacy students is generally the most appealing factor for individuals pursuing a career in academia. New faculty starting out will usually receive teaching assignments in the core curriculum that match with their practice specialty. At most colleges or schools of pharmacy, clinical faculty with doctor of pharmacy degrees will teach therapeutics topics, skills labs, recitations, or other courses that match the needs of the college with the expertise and interests of the faculty member. There may also be opportunities to create or teach elective courses.

A large portion of teaching responsibilities for clinical faculty is in the experiential setting, which involves precepting students at their clinical practice site. Depending on the faculty member's specialty, this includes precepting for Introductory Pharmacy Practice Experiences (IPPEs) and Advanced Pharmacy Practice Experiences (APPEs). Core APPE rotations that faculty may precept include inpatient general medicine, ambulatory patient care, hospital or health system APPEs, and community pharmacy APPEs.² Faculty may also precept elective rotations in their area of expertise, such as infectious diseases, pediatrics, academia, and drug information.

SERVICE

As practicing pharmacists, clinical faculty members are generally assigned a practice site in their specialty area as a clinical service. Because colleges of pharmacy rely on faculty of various specialties to have a well-balanced delivery of their curriculum, those specializing in nearly any practice area—including ambulatory care, internal medicine, infectious diseases, oncology, and more—can enter academia.

Notably, ambulatory care and internal medicine clinical specialists are well positioned for academia roles because of their versatility and wide range of knowledge of many topics in the curriculum. They are also typically assigned to precept core APPE rotations.

Responsibilities in the area of clinical service typically involve spending a set percentage of time in the hospital or clinic setting, depending on the specialty. The time spent at their practice site may vary by institution or the faculty member's goals and interests, but it is generally only part-time to allow for additional time to be spent in other areas of academia. These faculty participate in multidisciplinary patient care depending on the site's practice model. This may include rounding with an inpatient team, seeing patients in a clinic, or other responsibilities similar to a clinical pharmacist.

Service may also involve responsibilities to their academic institution, such as participating on school or college committees. Additionally, service to the profession, such as advocacy or involvement in professional organizations, is also highly encouraged.³

RESEARCH

Finally, research and scholarly activities round out the academic triad and responsibilities of a clinical faculty member. Research has a broad definition but typically includes activities, such as retrospective and prospective research studies, grants and contracts, posters or meeting abstracts, publishing scholarly manuscripts (review articles, research studies, etc), and book chapters.

Although research activities in the clinical practice realm may seem more commonplace, clinical faculty members often engage in the systematic study of teaching and learning processes, and their work is made public after peer review.⁴ This type of research helps advance best teaching practices, which are at the core of a clinical faculty member's role. Depending on their interests, they may engage in many different types of research over the course of their career.

There are many pathways for those looking to pursue a career in academic pharmacy as a clinical faculty member. One of the most straightforward methods is to enter academia following completion of residency or fellowship training. Most clinical faculty enter their positions following their postgraduate year 1 and postgraduate year 2 residencies.⁴ Some may complete academic or other types of fellowships in lieu of or in addition to residency.

Regardless of the pathway, identifying opportunities for exposure to the academic setting throughout a professional's learning career through elective coursework, academia APPEs, residency teaching certificate programs, and teaching opportunities will provide beneficial experiences.¹ Clinical faculty are able to teach, care for patients, research, and work to advance the profession of pharmacy. With this variety, no day is the same, and a career in academic pharmacy is rewarding, given its varied nature and the ability to educate and mentor future generations of pharmacists. ■

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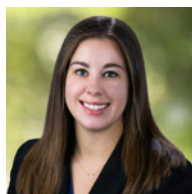
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How Pharmacy Graduates Can Prepare for Roles on Primary Care Teams

By CYNTHIA MOREAU, PHARM.D, CPH, BCACP



CYNTHIA MOREAU,
PHARM.D, CPH, BCACP

IT IS ESTIMATED THAT THERE will be a shortage of 17,800 to 48,000 primary care physicians in the United States by 2034, according to the Association of American Medical Colleges (AAMC). AAMC states that addressing the shortage will require a multipronged approach, including innovative care

delivery, use of technology, and improved use of all health professionals on the care team.^{1,2} In addition to midlevel practitioners, such as physician assistants and advanced registered nurse practitioners, pharmacists are health professionals that can be utilized to close the gaps in care within primary care settings.

Pharmacists can bring value to primary care teams through a variety of patient care services. In fact, published literature has demonstrated that pharmacists can improve the management of chronic conditions as well as the quality of prescribing and medication appropriateness.³

Each state has their own laws outlining the scope of practice for pharmacists, and many states now allow pharmacists to provide expanded clinical services through collaborative practice agreements (CPAs). CPAs are formal agreements between a pharmacist and prescriber—typically a physician—that outline specific functions that can be delegated to the pharmacist under the supervision of the prescriber. This can include initiating, modifying, or discontinuing medication therapy and ordering and interpreting laboratory tests.⁴ Disease states that may be commonly managed by pharmacists under CPAs include diabetes, hypertension, and hyperlipidemia.

This opportunity for supporting primary care physicians to a greater degree is one that pharmacy graduates can seize by rising to the challenge of closing health care gaps in primary care settings.

Early Exposure During Pharmacy School

Students with interests in ambulatory care and the provision of pharmacy services in primary care settings can start preparing for these roles early in their pharmacy school career. Introductory pharmacy practice experiences expose students to community and hospital pharmacy practices early in the curriculum. Beyond this, students should be proactive and seek opportunities to shadow pharmacists practicing in primary care settings, specifically those practicing with a CPA in place. Most schools and colleges of pharmacy are likely to have faculty who specialize in ambulatory care who could mentor students in this aspect.

As students prepare for their advanced pharmacy practice experiences (APPEs) in the final year of the curriculum, they should aim to select rotations that will allow them to work alongside preceptors that are actively engaged in the care of patients in primary care settings. The Accreditation Council for Pharmacy Education (ACPE) requires that students complete at least 1 APPE in an ambulatory care practice setting.⁵

However, students may also select additional elective APPEs that are also in ambulatory or primary care settings for further exposure to pharmacists' delivery of services in these settings. Although common pharmacist-managed disease states may include diabetes, hypertension, and hyperlipidemia as noted above, pharmacists may also manage other disease states in ambulatory and primary care settings, such as infectious diseases, cancer, and other cardiovascular diseases (ie, heart failure).

Postgraduate Training

Although postgraduate residency training is not necessarily required to work in primary care settings or enter CPAs, completion of residency training does allow recent gradu-

ates to gain additional exposure to various practice settings and hone their clinical skills.

Traditionally, postgraduate year 1 (PGY1) pharmacy residencies have provided advanced general training in a health system setting. However, as the roles of pharmacists have evolved, PGY1 residencies have also expanded to include programs that have a focus in ambulatory care. Additionally, PGY1 community-based pharmacy residency programs may also include experiences that allow residents to rotate through various clinics to provide patient care services.

Following completion of a PGY1 residency, graduates may pursue postgraduate year 2 (PGY2) training concentrating in ambulatory care practice, which provides specialized training to create clinical pharmacy practitioners that can manage patients with a variety of chronic disease states while exposing trainees to practice management principles. Compared with other available PGY2 pharmacy residency programs, ambulatory care pharmacy residency positions have grown exponentially in recent years,⁶ which demonstrates an increased need for—and supply of—pharmacists trained to practice within primary care settings.

Students with an interest in ambulatory or primary care practice should review residency offerings on the American Society of Health-System Pharmacists residency directory to determine if a residency program's experiences align with their interests and career goals.⁷

Certification

Beyond post graduate training, pharmacists may seek certification to expand their skillset and prepare to care for patients with chronic disease states. The Board of Pharmacy Specialties (BPS) establishes criteria for pharmacists to earn certification in various practice areas including ambulatory care practice (BCACP), pharmacotherapy (BCPS), geriatric pharmacy (BCGP), and cardiology pharmacy (BCCP), among others.⁸

Other certifications that may be pursued by pharmacists wishing to work in primary care settings include Medication Therapy Management (BCMTMS) and disease-specific certifications in human immunodeficiency virus (HIV) (AAHIVP), hypertension (CHC), lipids (CLS), heart failure (HF-Cert), and diabetes (Certified Diabetes Care and Education Specialist [CDCES] and Board Certified-Advanced Diabetes Management [BC-ADM]), among others. Holding these types of credentials can help prescribers identify pharmacists as experts in specific therapeutic areas.

Upon connecting with prescribers, pharmacists who wish to enter CPAs should also consult with their Boards of Pharmacy for state-specific requirements as some states may

require additional certifications and/or years of clinical training prior to entering these agreements.

Bringing Value to the Primary Care Team

Pharmacists wishing to take on roles on primary care teams should be prepared to provide services that will bring value to the team and the practice while keeping in mind that each practice will have unique medication-related needs and patient populations. Pharmacists can work with providers and practice managers to help identify patients who could most benefit from pharmacist-led services, including those with uncontrolled chronic disease states and those with polypharmacy issues.

Furthermore, pharmacists should consider how their services can help practices attain quality measures. For example, practices—especially those within value-based healthcare models—are often accountable for demonstrating the quality of the care they provide to patients through quality benchmarks such as those delineated by the Centers for Medicare & Medicaid Services (CMS) and the National Committee for Quality Assurance Healthcare Effectiveness Data and Information Set. Examples of these measures include hemoglobin A1C control among patients with diabetes, blood pressure control, and statin use among patients with diabetes or cardiovascular disease.⁹

Additionally, medication adherence is an important quality metric in primary care settings. CMS employs the star-rating system to determine the quality of Medicare-sponsored plans including Medicare Advantage (Part C) and prescription drug plans (Part D). Plans are rated based on their performance in several categories, including medication adherence to antidiabetic medications (excluding insulin), angiotensin-converting enzyme (ACE) inhibitors/angiotensin II receptor blockers (ARBs), and statins. Adherence is defined by a proportion of days covered (PDC) of at least 80%.

Each of these measures is triple weighted and can greatly affect a plan's overall star rating.¹⁰ Due to the impact of these ratings, primary care practices may have payment models with health plans to incentivize performance on the measures. As such, pharmacists have opportunities to initiate clinical services that are aligned with these benchmarks to improve the quality of care provided. Examples may include pharmacist-led clinics for patients with uncontrolled diabetes and/or hypertension and medication adherence interventions.

Today, pharmacists can serve as essential members of the primary care team. Pharmacy graduates are now better positioned than ever to seize this opportunity to become a vital member of the primary care team and a critical element to the successful functioning of health systems. ■

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Make This Year Your Best Year in Pharmacy School

By BROOKE L. GRIFFIN, PHARM.D, BCACP



BROOKE L. GRIFFIN,
PHARM.D, BCACP

IF I COULD TELL PHARMACY students how to make this year their best year in pharmacy school, I would tell them to start by assessing their limiting beliefs.

These are some common limiting beliefs that I've heard from pharmacy students:

- "It's too late to do research."
- "I'm not prepared for this rotation."
- "If my idea was good, someone would have done it by now."
- "My grades aren't good enough for that."
- "I'm terrible at talking to patients."
- "The application is due in 2 days—that's not enough time."

In my time as a student in pharmacy school, the last example in this list was a limiting belief that I struggled with. One day, I was playing this thought over and over in my head while considering an application deadline, then I happened to see 1 of my professors and said this statement out loud to her, and she immediately said, "Of course there's time! Do you need a letter from me?"

To be honest, I didn't even think about asking her for a letter as I had already convinced myself that 48 hours wasn't enough time to put together an application. I criticized myself for being behind the curve on beginning the application, thinking it was too late to even try, but her enthusiasm and willingness to write me a letter sparked hope within me. I realized that by recognizing the possibility for hope and optimism in this situation, my limiting belief wasn't doing anything to help me reach my professional goals. So why was I still listening to it?

During school, it is easy to compare ourselves to others, which can allow us to feel inferior to visible examples of success that we see in their lives. If we have our limiting beliefs playing on repeat in our thoughts, when opportunities arise, our minds are already playing these thoughts through their well-trodden grooves in our brains.

However, when opportunities do arise, especially in pharmacy school, they have the potential to change the course of our careers, open doors to new career paths, grow a network of like-minded peers, and ultimately lead to personal and professional growth.

NOT ALL PROFESSORS ARE INTIMIDATING

I have heard from pharmacy students that have attended

a class—either in person or virtually—and have had 1 of these thoughts:

- "I really like this subject."
- "This topic interests me more than anything else in pharmacy school."
- "How can I find a job working with this subject?"

When they express these thoughts regarding a class they connected with, the next logical step they should take is to talk to the professor about their connection with the subject material, either by reaching out after class or by making an appointment to further discuss. Yet many students don't take this step.

Perhaps the reason some students don't take this important step is anxiety or fear due to finding the professor intimidating. However, students that push past these feelings and find a way to introduce themselves to a professor or presenter at this pivotal stage in their careers may find that making such a connection can change the course of their professional future.

Some methods to make this an easier step in the future is by engaging in the following activities:

- Network with peers
- Practice talking to people who may or may not seem intimidating
- Practice talking about subjects of professional interests with those knowledgeable in the field
- Find out what you can do to learn more about subjects of professional interest
- Learn that professors are people, too, by talking to them with more regularity
- Learn about professors' careers and what they think about the future of the profession
- Build relationships with like-minded professionals that go beyond a meet and greet

When I was a pharmacy student, I wish I had practiced these conversational skills on campus. My assumptions tended to get the best of me, whether it was when speaking with a professor, a physician, or a patient. If I had the courage to inquire about interesting topics and spoke to more professors, I would learn that they are just like us—but with age and experience—and do have the time to answer my questions. ■

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AACP Presents Awards to Institutions, Educators, Innovators at 2021 Annual Meeting

The organization recognized 5 individuals, 1 institution, and 1 scholarly paper for their contributions to pharmacy education, research, patient outcomes, community service, and publication.

By SKYLAR KENNEY, ASSISTANT EDITOR

THE AMERICAN ASSOCIATION OF COLLEGES of Pharmacy (AACP) publicly honored the recipients of their top awards at the 2021 AACP Annual Meeting. The organization recognized 5 individuals, 1 institution, and 1 scholarly paper for their contributions to pharmacy education, research, patient outcomes, community service, and publication.¹

"In times such as the current pandemic, the impact of excellence in all dimensions becomes even more obvious and needed," said Lucinda L. Maine, PhD, RPh, AACP CEO and executive vice president, in a prepared statement. "AACP's award recipients exemplify excellence in teaching, research, and service with far-reaching impact here and around the world."¹

AACP, a national organization that represents the interests of pharmacy education, is comprised of 142 accredited schools with pharmacy degree programs, including over 6700 faculty and 67,000 students. Their annual awards are meant to honor those at the forefront of health care professions education and who are advancing pharmacy innovation, enhancing patient care and adding value to the health care system through their work.¹

The Robert K. Chalmers Distinguished Pharmacy Educator Award was presented to Brian Erstad, PharmD, MCCM, FCCP, FASHP, of the University of Arizona College of Pharmacy. This award recognizes his outstanding achievements as an educator and mentor, his innovations in the classroom, and his overall impact on pharmacy education and the profession of pharmacy.¹

"Across his distinguished career of more than 30 years in pharmacy education, Dr Erstad has become known for his deep commitment to 'caring' as an educator and his demonstrated impact across a spectrum of learners, from pre-licensure professional degree students, to residents, to pharmacists, and to other clinical care providers," said Todd Sorensen, PharmD, FAPhA, FFCP, outgoing AACP president, during the ceremony.²

William R. Doucette, PhD, FAPhA, RPh, was presented with the Paul R. Dawson Award for Excellence in Patient Care Research, to recognize his innovative and impactful research in the areas of patient care, as well as the collaboration between pharmacists and other health care providers.¹

“The impact of excellence in all dimensions is even more needed.”

“Dr Doucette has devoted his career to the positive impact pharmacists can have on patient health,” said Anne Lin, PharmD, current AACP president, during the ceremony. “For more than 2 decades he has conducted numerous studies and analyses that have helped community pharmacies advance their practices by addressing obstacles that can prevent them from providing the best care for their patients.”³

Carston “Rick” Wagner, PhD, of the University of Minnesota, received the Volwiler Research Achievement Award, recognizing his record of sustained excellence in research and entrepreneurial work in chemical biology.¹

“Dr Wagner has a remarkable record of sustained excellence in research and entrepreneurial work in chemical biology,” Lin said during the ceremony. “His lab seeks to apply the principles of organic chemistry, enzymology analytical chemistry, molecular & cellular biology, biophysics and nanotechnology to the development of new methods for drug design and delivery, chemically engineered cellular therapies, and tissue engineering. The laboratory’s primary therapeutic focus has been on the development of new anti-cancer and antiviral therapies, as well as novel non-opioid pain medications.”³

Laura Cranston, RPh, co-founder and former chief executive officer of the Pharmacy Quality Alliance, was presented with the Distinguished Service Award for her work to advance the recognition of pharmacists’ contributions to safe, effective and high-quality patient care through quality measurement and improvement.¹

“It is a special privilege for me to present the 2021 Distinguished Service Award to not just an outstanding individual, but someone who was also my classmate at St John’s University when we were both in the [bachelor of science] pharmacy program,” Lin said during the ceremony.⁴

Following this, the Lifetime Achievement Award was presented to Victoria F. Roche, PhD, of Creighton University, for her rich portfolio of accomplishments related to instruction, leadership, service and scholarship over 25 years.¹

Additionally, the University of Connecticut received the

Lawrence C. Weaver Transformative Community Service Award for its commitment to addressing unmet community needs through education, practice and research.¹

“Working closely with dedicated state agencies and community partners, the UConn School of Pharmacy has provided valuable services to those who need additional support to overcome health disparities, such as the homeless, refugees, migrant farmworkers and residents in the inner cities,” Sorensen said during the ceremony. “UConn Pharmacy Urban Service Track students and faculty lead a large portion of interprofessional outreach efforts and have developed new projects to expand the curriculum’s reach even further every year.”²

The Rufus A. Lyman Award, which recognizes the best paper published in the *American Journal of Pharmaceutical Education* during the previous year, was presented to “A Historical Discourse Analysis of Pharmacist Identity in Pharmacy Education,” by Jamie Kellar, PharmD, University of Toronto, Canada; Elise Paradis, PhD, University of Toronto, Canada; Cees P.M. van der Vleuten, PhD, Maastricht University, Netherlands; Mirjam G.A. Oude Egbrink, PhD, Maastricht University, Netherlands; and Zubin Austin, PhD, MSc, MBA, BSc Phm, MEd, University of Toronto, Canada.¹ ■

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Black Resilience in the Face of Indifference Is Vital to the Future of Pharmacy Education

By LEYLA RASHID, PHARMD CANDIDATE



LEYLA RASHID,
PHARMD CANDIDATE

I WAS DRAWN TO PHARMACY because of the accessibility of pharmacists, as patients don't have to schedule an appointment or pay a co-pay to get medical advice from these health care professionals. In a country fraught with racial disparities, I believe that a career in pharmacy might be a way for me to realize and act upon my quest for equity.

As a young Black woman, I'm no stranger to racism. I was born and raised in southern Indiana, 20 minutes from a former sundown town well-known for being the birthplace of a prominent Grand Dragon of the Indiana Ku Klux Klan.^{1,2}

Avoiding racism in Indiana was easy in some ways. For example, I knew that when I crossed the city limits of Bloomington, a liberal enclave within the red state, anything goes. After earning my undergraduate degree at Indiana University Bloomington, a predominantly White institution, I yearned for change.

In selecting a school, the University of Minnesota College of Pharmacy was the front-runner with its third-place national ranking. Minnesota is lauded as being liberal, progressive, and diverse and is home to the largest Somali population outside Somalia,³ not to mention home to ethnic minority groups, such as Hmong, Karen, and Liberian.^{4,5} I'd heard the phrase "Minnesota Nice" used to describe Minnesotans, who are stereotypically friendly, and thought I'd be in good hands. Because I had yet to meet an African American pharmacist, I hoped Minnesota could provide a Black mentor to guide me through this new chapter in my career.

Although Minnesota is more diverse than Indiana on paper, there were only 2 other African American students in my class of 150. What was familiar was the racial segregation I found in the Twin Cities, which stems from racial covenants written into property deeds that explicitly barred Black people and other marginalized groups from buying or renting property; Minneapolis remains one of the most segregated cities in the country.⁵ Despite these racist practices being well documented and well researched, my classmates were none the wiser; a class-

mate of mine mentioned to me that they had never heard of the term redlining before.

In a lot of ways, I found that my experience of Minnesota Nice was that of willful ignorance of the structural racism weaved into the history and culture of the state. Even if the state was diverse, I found that Minnesota Nice also allowed microaggressions to take place without being checked. Instead of my classmates holding each other accountable for their problematic behaviors during class discussions, I received support via private messages. However, when given the space and class time to discuss racial inequities, the classroom was silent.

To my classmates, I was an unofficial educator and racial historian. It's one thing to be recognized for advocacy, but it's another to become the informal race referee. I was the 1 student who suggested that students of color shouldn't have to recount their past racist experiences in order to discuss discrimination. I spent hours linking additional resources for my classmate who claimed that "Black people have poor diets" instead of focusing on my own studies. All my extra-curricular activities centered on diversifying the pharmacy field, as well as decreasing health disparities for Black, indigenous, and people of color communities. Most days felt like I was continuously walking up the down escalator.

The COVID-19 pandemic was an accelerant for my growing isolation within my pharmacy community as we switched to online learning. The strain of physical confinement during a global pandemic coupled with rigorous online coursework and working on the front lines took a toll on my mental health and amplified the stress of my prior struggles to feel heard and understood in my pharmacy community.

To foster a sense of belonging, the College of Pharmacy created affinity groups to bring together faculty and students with shared identities and backgrounds.⁶ The Black and African American Affinity Group became a space where I and other Black students could discuss our struggles at the college, as well as share our successes and joys. In this group, we were able to develop stronger mentorships with our Black professors outside the classroom. It was this group that supported me through summer 2020.

Six miles away, on May 25, 2020, the Minneapolis Police Department reported, “Man Dies After Medical Incident During Police Interaction,”⁷ the article that preceded the video of Derek Chauvin kneeling on George Floyd’s body until he was no longer able to breathe, resulting in Floyd’s death. Protesters took to the streets, as did the police, in staggering numbers. Within 1 week, citizens of the Twin Cities were policed by 13,000 Minnesota National Guard members and 2500 soldiers: the largest deployment in the Minnesota National Guard’s 164-year history.⁸ Peaceful protesters were subjected to tear gas, rubber bullets, and batons, launching a summer (and subsequent year) of social unrest across the globe.

Police helicopters became a near constant as they flew over protesters in the streets. The loud and unsettling hum of helicopters continued into 2021 as police proceeded with surveillance of all neighborhoods in the metro area of my city.⁹ If I wasn’t feeling on edge from the excessive police presence, my anxiety would instead stem from seeing my classmates’ posts on social media criticizing protests and property damage rather than being outraged that another Black person was killed by police (Philando Castile was murdered in 2016 by St Anthony police, to name another example).¹⁰

I eventually grew tired of explaining how protests and riots can help to bring about change and defending why George Floyd didn’t deserve to be killed. I wanted to tell my classmates that I don’t have all the answers, and I’m not the representative of the Black community, but instead am an individual with my own life and story. Having to continually illustrate George Floyd’s humanity was depleting my remaining reserves.

The professors in our affinity group suggested we start a Student National Pharmaceutical Association (SNPhA) chapter to create an actionable organization that could produce change within the college. The Black community within the college was tired of talking about having these “difficult conversations” and not seeing anything done about the injustice in our own backyard. The professors supported us through our application process and helped us draft our chapter objectives.

After the organization was launched, the SNPhA’s first Zoom meeting was victim to a racist cyberattack; it was the professors in our affinity group who supported me as I processed this traumatic event. Despite all the work that went into establishing this organization and creating this space, hatred still infiltrated our community, and I didn’t think I had the stamina to keep SNPhA going. When my professors saw this occur, they sent me their phone numbers, opened their schedules, and made themselves available to talk. They gave me time to grieve and the space for solitary reflection.

Additionally, my professors filed a report with the FBI and attended every Zoom call that recounted the cyberattack experience. Despite my lack of hope that SNPhA and I would bounce back, my professors were right; SNPhA went

on to host a lecture series highlighting and denouncing race-based medicine principles perpetuated within the curriculum. In the absence of support from other student organizations, it was the care of the Black faculty that kept me from bowing out.

The existential problem of the work of an advocate is that this work never ends. It takes foundational changes in the infrastructure of the very system on which we rely to meet our basic human needs to address the greatest fissures in our society, and these things don’t happen overnight. But with continued effort and recuperative self-care, the advocate’s progress can continue.

I am so grateful for the support the professors in our affinity group have given me, and their encouragement to rediscover my *raison d’être* in my work as an advocate devoted to improving equity in pharmacy education. Like a relay team, we pass the baton when it’s time to take a break in order to foster Black resilience; this resilience requires celebrating small wins and reflecting to see how far we’ve come.

Thank you for your support, Caroline Gaither, PhD, FAPhA; L’Aurelle Johnson, PhD; and Olihe Okoro, PhD, MPH, MPharm. ■

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The Importance of Getting Involved in Professional Pharmacy Associations During Pharmacy School

By SAVANNAH CUNNINGHAM, PHARM D CANDIDATE



SAVANNAH CUNNINGHAM,
PHARM D CANDIDATE

MY FAVORITE PART ABOUT PHARMACY

school has been getting involved in professional pharmacy associations; attending events, holding leadership positions, and learning more about what the pharmacy associations have to offer has been the highlight of my 4 years and will continue to be long into

my career as a pharmacist.

During orientation week in my first professional (P1) year, more than 20 organizations with chapters at Mercer University stood in front of us reciting their various acronyms and premises, and the decision about which organizations to join felt overwhelming. Since then, I've learned that each association provides unique reasons for students to join, most of which should overlap or coincide with students' own niche interests. Most students join 1 or 2 organizations, but I chose to join every association that correlated with my future career goals.

I chose the National Community Pharmacists Association (NCPA) because my background in pharmacy had only been in community pharmacy, and I knew this was an eventual practice area where I hoped

to find a career. I also joined the American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP) because, as the largest pharmacy association in the country representing all practice areas, this organization serves as the voice of pharmacy to advocate for the profession, and I wanted to be a part of that voice.

Both the Georgia Pharmacy Association (GPhA) and the Tennessee Pharmacists Association (TPA) were also appealing to me because, while going to school in Georgia and being from Tennessee, these are the 2 most likely states for me to practice in, and I wanted to be aware of what is happening in the profession in those states. Additionally, I joined the American College of Veterinary Pharmacy (ACVP) and the Alliance for Pharmacy Compounding (APC) due to my interest in both of these areas.

Attending conferences was the kick-start to my involvement in pharmacy associations. I made it my goal to attend as many as possible, which resulted in going to 11 conferences in my first year of pharmacy school while balancing time constraints and other responsibilities. Not only is each conference an opportunity to travel to interesting locations across the country, but it is also a

chance to network with fellow attendees, find inspiration from the sessions' content, and meet influential leaders in the profession.

The biggest concern I hear from fellow student pharmacists who are hesitant to attend conferences is the cost, which I believe is far outweighed by the benefits of attending. Budgeting for these types of events and making them a priority to attend will only result in positives as students will undoubtedly meet future colleagues, contacts/resources, or employers at these events.

Almost every association holds opportunities for student leadership, many of which I have sought out to learn more about and how to build essential leadership skills. I ran for an elected position at a regional level just 2 months into my P1 year, which included giving a speech in front of 500 people and campaigning for myself throughout the weekend, resulting in a win for the position of the APhA-ASP Region 3 Midyear Regional Meeting Coordinator for 2018-2019. This was followed by a whirlwind of other leadership opportunities, not only within APhA-ASP, but in other organizations as well. After this success, I felt ready to run and apply for other positions to follow the achievement of my first.

During my time in student leadership, my most notable positions included president for my APhA-ASP chapter at Mercer University, a member of the APhA-ASP National Standing Committee on Communications, secretary for Mercer University's NCPA chapter, student board member for ACVP, and creator and president of the GPhA Student Leadership Board. Each position requires additional time—and often travel—but provides an opportunity to make connections and build leadership skills that will be valuable no matter the practice setting I choose. With the limited exposure to high level leadership positions I experienced before pharmacy school, I have done a lot of learning on the job, pushing myself to achieve, and sometimes surprising myself with success.

Leadership and involvement in associations can open doors and I often use these examples to encourage other student pharmacists to take advantage of these opportunities as well. I was offered a pharmacy intern job at Innovation Compounding, an independent pharmacy outside of Atlanta, Georgia, after meeting the owner while attending an APC Compounders on Capitol Hill conference. Additionally, a connection I made with the CEO of Pharmacy Quality Alliance (PQA) turned into a rotation at the organization, and a recommendation from an employee who held a similar leadership role at the National Alliance of State Pharmacy Associations (NASPA) became a year-long internship.

In addition to job opportunities, involvement and leadership can also lead to scholarships, which is

“Associations provide inspiration to achieve and to lead through innovation.”

always an advantage when you're living on a student budget. Almost every organization offers student scholarships, and the required qualifications often include involvement or leadership.

Lastly, I have grown in my knowledge about future career paths that I didn't even know existed. The value of associations in the profession of pharmacy is unparalleled, each acting as a collective voice stronger than individuals in a particular specialty practice area. More specifically, the organizations I am involved in focus on legislative advocacy, making efforts to create positive change in legislation that will propel our profession forward and break down barriers to practices that currently exist.

Student pharmacists often hear the phrase “pharmacy is a small world.” The chance to network with fellow association members can develop into jobs, internships, rotations, and connections for the future that will be valuable for the remainder of a student's career. Associations also allow members to stay up-to-date on the profession, providing learning opportunities—like continued education and webinars—to draw from fellow members who are a great source of knowledge and advice. Perhaps most importantly, associations provide inspiration to achieve and to lead through innovation in the profession.

Notable pharmacists are always leaders in associations, and in order to join the ranks of these individuals, it's necessary to first seek a seat at the table as well. Associations allow me to be the best future pharmacist I can be, and my drive to accomplish more for patient care and the profession can only be assisted by my membership and leadership in these organizations. ■

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Learning the Value of Community With the Indian Health Service

By JENNALYNN FUNG, PHARMD CANDIDATE



JENNALYNN FUNG,
PHARMD CANDIDATE

WHEN ONE THINKS OF A pharmacist, most people's first thought may be of the person standing behind the pharmacy counter at a local Walgreens or CVS, or a bustling hospital located in the centers of the biggest metropolitan cities in the world. However, in rural communities—particularly in Native

American reservations—the pharmacy environment looks a bit different, and the role of the pharmacist in these communities is heightened in scope.

For Native American reservations, medical services are provided by the Indian Health Service (IHS), which is an operating division within the US Department of Health and Human Services (HHS) and US Public Health Service (USPHS). IHS provides direct medical and public health services to 2.6 million American Indians and Alaska Natives in 37 states.¹

Beyond providing care for indigenous populations in the United States, the USPHS also provides a pathway for students to work within these federal agencies through their Junior Commissioned Officer Student Training and Extern Program (JRCOSTEP).

For the summer of 2021, I had the opportunity to work as a Junior Commissioned Corps Officer at the Crow Service Unit in Crow Agency, Montana. JRCOSTEP students within IHS are those who pursue medical education and work as “seasonal” staff at the service unit. My main duties were to assist in the prescription flow in the outpatient pharmacy by filling, dispensing, restocking, and ordering medications, as well as working in the inpatient pharmacy by restocking the emergency room, inpatient clinics, and assembling crash carts.

As I look toward the start of my first professional pharmacy year, I've been thinking about the kind of pharmacist

that I want to be in the future and whether I want to specialize in a specific area. Working in a clinical pharmacy has helped show me the varied roles a pharmacist can have, even within 1 hospital.

During my externship, I briefly shadowed Crow's Pharmacy Informaticist, Kelsey Kroon, PharmD, to learn how drugs were entered into the system for use by providers and verification by other pharmacists. Kroon is responsible for updating the information on what drugs could and could not be accessed on Electronic Health Record (EHR) drug menus, following Pharmaceutical and Therapeutics Committee Meetings with other departments.

When supporting Kroon in this process, I was able to verify the EHR drug menu to see that the antibacterial options were up-to-date with advised first-, second-, and third-line of therapy, and so on. Furthermore, I double checked, revised, and formatted comments in the outpatient formulary excel spreadsheet.

One of the most interesting parts about the externship was working at the satellite clinics in Lodge Grass and Pryor, both located in Montana. Although both locations were hour-long drives from where I was living and located in the most rural parts of the reservation, these clinics are vital to the locals who cannot afford to make the lengthy trip to the Crow Service Unit. Without these satellite clinics, it would be difficult to ensure medication adherence and to monitor the effects and implementation of certain treatments. In emergencies, these clinics can immediately provide the stabilizing care that a patient may need until it is possible to transfer them to a larger service unit.

As part of pharmacy staff, I was able to engage in meaningful discussions with many of the pharmacists, physicians, nurses, dentists, and administration at the Crow Service Unit.

Many of the health care workers at IHS are commissioned officers, which was extremely helpful in learning about what the process of working as an officer was like, why they decided to join, and what their experiences were like at other facilities. Dean Goroski, director of pharmacy at Crow Service Unit, has been with the USPHS as a commissioned officer for many years. This wealth of wisdom helped me develop a clearer picture of the types of careers available to pharmacists when working for the federal government.

The relationship between the federal government and Indian tribes was established in 1787, based on Article I, Section 8 of the Constitution of the United States.¹ As the primary federal health care provider for natives, IHS continues to work to raise their health status to the highest level.

The IHS focuses on specific areas, such as encouraging natives to get the COVID-19 vaccine to help decrease overall deaths from COVID-19, as well as helping with the management of diet, nutrition, and exercise to reduce rates of obesity, heart disease, and diabetes on the reservation. The IHS also delivers sex education courses to support a reduction in teenage pregnancies and the spread of sexually transmitted diseases.

The focus on education and support can be seen throughout the clinic on posters and desktop screensavers that display facts about the importance of receiving vaccinations and getting tested for COVID-19, in addition to information on diet and safe food storage.

These educational efforts seem particularly effective as 71% of the IHS employees are Native Americans.² Amber Walks Over Ice, PharmD, deputy chief pharmacist of the outpatient pharmacy at the Crow Service Unit, is originally from the native community in Flathead County, Montana. Most of the pharmacy technicians are native Crows, but some, like Jennifer Lawton, CPhT, are Navajo. As the vaccination rates slowly increase within the Crow reservation, the efforts of the IHS team at the Crow Service Unit become more visible.

Every summer, Crow Agency hosts Native Days, a series of events and festivities where members of the tribe can exhibit their physical and mental skills through competition. The main events include the rodeo, relays, arrow tournaments, and the Ultimate Warrior races, which involve a mile-long canoe race, a 6-mile foot race, and a 6-mile horse relay. There are also prayers, parades, and a powwow.

During my time at the Crow Service Unit, I was fortunate enough to watch the women's Ultimate Warrior race alongside one of the native pharmacy technicians, Randa Black

Eagle, CPhT. As part of the crowd, I could see how Native Days brought everyone together.

The time I've spent in Montana as a JRCOSTEP student has been invaluable. Beyond gaining experience in a clinical pharmacy, I have been able to interact with the Crow tribe—whose autonym is Apsáalooke, or Absaroka—both personally and professionally, which is something not many Americans have done. Since the Native American reservations are sovereign states and do not often house outsiders beyond IHS staff, most people have no concept of what it means to be Native American in the 21st century.

Natives' most frequent media representation features a bow and arrow and a feather, and they're often depicted as wild or savage—even today, in some Scholastic textbooks. However, the Native American population is not something of the past, and they are not relics of a time long forgotten. They are alive and have survived years of genocide. Today, they are continuing to revive their culture and heritage through language, Native Days, social events, like Crow Fair, and the employment of natives within IHS.

It may sound counterintuitive, but what makes a pharmacist great at their job is not just their understanding of pharmaceuticals, but their ability to show empathy for a patient. For this reason, my time at the Crow Service Unit taught me that truly great pharmacists strive to understand their patients' way of life, their struggles, and their victories.

The road to becoming the greatest health care provider I can be is not just through school, but through genuine interactions with the humans I serve as well. This is why serving as a JRCOSTEP student at the Crow Service Unit remains instrumental in my understanding of who I want to be in my role as a pharmacist in any community I may work in, in the future.

Had it not been for my participation in the JRCOSTEP program, I would never have encountered the strength and resilience of the Crow tribe. The time I have spent with the USPHS will stick with me for the rest of my career. Despite working in the Crow Service Unit for only 3 months, the time I spent there made me excited for the rest of my journey as a student. One day, as a licensed pharmacist, I will have the opportunity to help make my community healthier, which is a goal I know I can be proud of. ■

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Working on a Research Team Helps Develop Essential Practices, Skills

By JAMES A. LUGTU, PHARM D CANDIDATE



JAMES A. LUGTU

IN ADDITION TO THE ACADEMIC lessons necessary to become a pharmacist, hands-on research experience can help students learn practices and skills that are essential to being an effective, patient-centered health care professional.

My dream of becoming a pharmacist became a reality the moment

I received my letter of acceptance from California Northstate University. After receiving this letter, I reached out to Ashim Malhotra, PhD, MS, PharmBS, FAPE, my faculty adviser and mentor for the 2021 Walmart Scholar Award, to explore the various experiences a first-year pharmacy student could be involved in, and he invited me to his research team that was focusing on targeting the mitochondria for novel drug discovery in pancreatic cancer.

Through this research experience, I learned how to conduct best pharmaceutical sanitation practices, how to connect disparate scientific concepts that serve as the underpinning of patient-centered care, how to write and communicate

scientific literature, and how to manage my time while working in a high-stress environment.

Research is important for both the advancement of medicine and for patient-focused, efficient pharmacy practice. It is important that pharmacists pay attention to every detail when verifying prescriptions and ensuring good pharmacy practice includes providing patients with their medications at the highest quality standards of care possible.

Proper disinfecting and cleaning of the counter, pill counting trays, and devices, coupled with proper personal sanitizing techniques, provide patients with clean, uncontaminated medications, which became more important than ever after the emergence of COVID-19. During my time with the research team, I learned several of these sanitation skills, including the aseptic technique, continuous mammalian culture, experimental design, and quality assurance assays.

Performing the different assays helped me better understand the impact of pharmacological products on biological mechanisms. For example, the reactive oxygen species (ROS) assay is an experiment that determines

the effect of oxidative stress on various intracellular pathways through the measuring of ROS, which are natural by-products that can affect cells in multiple ways. Since ROS can also trigger apoptosis, it is used as a target in treating patients with tumors and is a predictor for efficacy of anticancer medications.

Performing this assay helped me connect cellular biology concepts to pharmacotherapy treatment, which gave me a better understanding of why we learn these concepts in pharmacy school and why it is important to have a strong background in foundational science.

Aside from working with a research team, I had the chance to improve my scientific writing and communicating skills, both of which are essential in pharmacy. Scientific writing and communicating with other health care professionals can be daunting, but collaboration and coordination of novel ideas and treatments are necessary to contribute to the advancement of medicine.

Fortunately, the research team I was a part of actively exposed me to the world of scientific literature and how to appropriately communicate data through the creation of posters, book chapters, manuscripts, and presentations. By presenting at conferences, such as the American Society of Health-System Pharmacists Midyear Meeting and the American Society for Pharmacology and Experimental Therapeutics Annual Meeting, I learned to practice my presentation skills in front of other health care professionals, further fortifying my professional confidence and competence.

Lastly, time management is an important skill for any future pharmacist. Without it, I would not have been able to balance school, work, and research. On top of that, effective time management gave me more time to focus on my well-being during the school year and decreased my overall stress.

Although performing under stress is not a skill taught in school, it is a valuable skill to have for any professional pharmacy career. During lab meetings, we are put on the spot and asked to explain our experiments and their significance. Being ready to answer unexpected questions is stressful, but it is similar to being on rotation and being asked questions by a preceptor.

Working with a deadline and being put on the spot in the lab also helped prepare me for my advanced pharmacy practice experience rotations and, subsequently, will continue to help me throughout my career. Acquiring the skills related to time and stress management coupled with the opportunity to integrate foundational sciences with experiential learning is challenging, but it is comforting to

“The lessons I’ve learned from my research experience go beyond the professional sphere.”

remember that these experiences are universal. Not only pharmacy students, but many students from other professional backgrounds are also experiencing similar challenges.

As an academic goal, the desire for the betterment of human life (ie, drug discovery research) is a noble goal in and of itself. Yet, more specifically, the ultimate goal of the pharmacy profession is to improve the quality of patients’ lives and decrease disease burden and related morbidity and mortality. Being a part of Malhotra’s lab helped me understand this specific goal with greater clarity, gain the skills I needed to perform at my highest level on rotations, and develop my professional persona as a future practicing pharmacist.

However, the lessons I’ve learned from my research experience go beyond the professional sphere, which is largely due to the efforts of my mentor over the past 3 years. For pharmacy students—both current and future—I would highly recommend finding a faculty member that conducts research that is of professional interest. In addition to practical experience, a mentor-mentee relationship in pharmacy school can provide guidance to help achieve personal, academic, and career goals. My experiences helped me contextualize the universality and significance of hypothesis-driven, evidence-based, scientific discovery and scholarship, as well as the need for practicing effective and audience-targeted communication as a pharmacist. ■

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Pharmacists See Opportunities in TikTok to Educate, Advocate

By AISLINN ANTRIM, ASSOCIATE EDITOR

AS THE APP TIKTOK HAS exploded over the past 2 years, influencers have identified new ways to gain followers and expand their influence using the app's short-video format. Among these influencers are a growing number of pharmacists and pharmacy students who are educating young viewers and advocating for the profession.

Monthly users of the app have grown nearly 800% since January 2018, according to data released in August 2020 and reported by CNBC.¹ Over 100 million Americans are considered active monthly users, and over 50 million are daily users.¹ The pandemic played a major role in this growth, with users in the United States skyrocketing from almost 39.9 million in October 2019 to almost 92 million in June 2020.¹

According to a paper published by the Society for Academic Emergency Medicine, TikTok has been a major source of information during the pandemic, especially for younger viewers. Investigators searched the hashtag *coronavirus* on the app and found 90 billion views, whereas the hashtags *medicine* and *doctor* received 1.4 billion and 6.7 billion views, respectively. Pharmacists on the app are also finding niches in which to educate the audience, including the 3 pharmacists profiled below.

SAVANNAH MALM, PHARMD, IBCLC

Like many TikTok users, pharmacist Savannah Malm, PharmD, IBCLC, downloaded the app out of boredom at the beginning of the pandemic. At the time, she was stuck in South Carolina while her husband was in Idaho, and her International Board of Lactation Consultant Examiners exam was canceled.

"I downloaded the app just to pass the time," Malm said. "At that point, there was no indication that I was going to do anything beneficial on it."

Now with 705.8 thousand followers around the world and 23.1 million likes, Malm (with the username @rxOrcist) has garnered one of the largest followings among pharmacists on TikTok. Malm's interests include lactation counseling and COVID-19 vaccine advocacy, so she aims to educate viewers on both issues. In the interview, Malm said she is the first person in the country to have both a PharmD and IBCLC certification.

She now posts a combination of educational content as well as what she termed "accountability content," which involves calling out those who post misinformation on the app.

"I find people doing illegal things [or] posting misinformation in very egregious ways," Malm said. "It's a mix between [those]."

However, Malm's popularity has come with a price. In addition to the millions of likes and positive comments, she and her family have been attacked and threatened online by antivaccine groups and others who disagree with her content. In 2020, she posted a video discussing pharmacists' right of refusal to fill a prescription and was attacked online by a chronic pain advocacy group.

"That was the first experience I had with people who didn't like to hear the truth, so they responded with very violent attacks," Malm said.

She also began calling out videos with fake COVID-19 vaccine cards in the spring of 2021 and was quickly attacked for that as well. One video received almost 11 million views, after which her address was posted online. Malm then had to work with the Federal Bureau of Investigation, although she said there is no way to know who posted her address, and it is still posted to this day.

"I've learned there are people who want to avoid accountability so badly that they will respond in such a way that they escalate it to very violent, angry threats," Malm said.

When asked why she continues to use the app despite these attacks, Malm said she quit social media for 3 weeks and debated whether to return. Some viewers said she was endangering her young daughter by returning, but she decided that she wanted to use the platform to advocate for under-represented groups and marginalized communities.

“Being a White person in America with the privilege I’ve been born into, [and] being able to just walk away from it, is a privilege that many marginalized communities do not have,” Malm said. “I don’t get to hide because they don’t get to hide. I want to be a true ally to these communities that I’m trying to serve and amplify their voices.”

This chance to amplify marginalized voices is one of the major places Malm said she sees potential for TikTok as an educational tool. She added it is also a great way for her to talk about issues that interest her and to connect with like-minded people who also want to fight misinformation.

PETER GINN, PHARMD

Peter Ginn, PharmD, has also used TikTok as a tool to advocate for the profession—in particular, for provider status. Ginn graduated from Campbell University and now works in the intensive care unit (ICU) at a large community teaching hospital in North Carolina.

Like Malm, Ginn said he downloaded TikTok for entertainment during the first few weeks of the COVID-19 pandemic. He quickly found some medical creators and decided to post about pharmacy, because he said he did not see many pharmacists utilizing the app. Now he has 3227 followers and 42 thousand likes, under the username @pgpharmd. As the pandemic escalated, Ginn said he started tackling misinformation.

“I’m really interested in trying to create...factual COVID-19 information that is somewhat relatable [and] that combats some of the vaccine hesitancy that’s out there,” Ginn said.

Ginn explained that, at this point, almost every patient with COVID-19 he sees in the ICU is unvaccinated, so he hopes his content will reach those people. He also said the app has potential beyond the pandemic and suggested that short educational videos about commonly prescribed drugs could be especially successful.

“Everyone always [asks], ‘Do you have any questions for the pharmacist?’ And everyone always says, ‘No,’” Ginn said.

Because of this, he said many patients might not know basic information about their medications, such as whether it is acceptable to take a certain prescription at night or whether it should be taken with food.

Ginn has also used the app to network with other content creators, including Malm, who he said has been an inspiration in pushing the issue of COVID-19 vaccines. Although Ginn said he does not feature his responses to misinformation as frequently as Malm does, he will often respond to misinformed comments or might make a video to explain the topic further.

In addition to working on COVID-19 content, Ginn said he is passionate about advocating for pharmacist provider status. With such a large potential audience on the app and with so much new recognition for the role of the pharmacist during the pandemic, Ginn said he sees a chance to accomplish this goal.

“TikTok can be used to advocate for provider status—both by current pharmacy students and practicing pharmacists,” Ginn said. “Pharmacists are some of the most accessible health care professionals, yet [the Centers for Medicare and Medicaid Services] does not recognize pharmacists as health care providers. When the COVID-19 pandemic dust settles in the future, I imagine I’ll try to advocate for pharmacists to be recognized as health care providers.”

SAGAR PAREKH, PHARMD

Unlike Malm and Ginn, who downloaded TikTok in early 2020, Sagar Parekh, PharmD, said he got started on the app during his third year of pharmacy school at the end of 2019. He initially started by posting humorous videos based on his experiences in retail pharmacy, but also included videos on his South Asian heritage and what it was like growing up as an Indian American.

“I just started creating these funny clips about being asked weird questions like ‘Hey, do you know where the bathroom is?’ while you’re a pharmacist,” Parekh said.

In addition to his first 2 topics, Parekh said he now creates content about working in a corporate environment. Since graduating from Rutgers University Ernest Mario School of Pharmacy in the spring with his doctor of pharmacy degree, Parekh said he works in the pharmaceutical industry and is participating in an oncology brand marketing fellowship through the Rutgers Institute for Pharmaceutical Industry Fellowships.

He has also uploaded some videos about the importance of COVID-19 vaccines, although he said this is not a major focus of his platform. Parekh said he likes to create funny content and entertain viewers, as there are many professionals who use the app as an educational tool.

“I view my platform as a place people can go for humorous jokes, for something that’s lighthearted, something that they can relate to, and just provide them a good laugh,” Parekh said.

He added that he sees boundless potential for the app both as an educational tool and as a network-building opportunity.

“There’s no roof to where it can go,” he said. “It can be a huge educational tool...with some of the fast facts you can provide, such as what different medications do. It can be a cool way for pharmacy students to stay engaged and stay in the loop while using a social platform that is really fun to be on.” ■



Pharmacy Students Reflect on the Pandemic, Look to the Future

By SKYLAR KENNEY, ASSISTANT EDITOR

AS COLLEGES AND UNIVERSITIES PLAN to begin in-person classes once again, pharmacy students face several new challenges adjusting to this return from the socially distanced learning they have participated in for the past year.

In the latest installment of the *Pharmacy Times*® Student Café™ interview series, students from The University of Texas (UT) at Austin College of Pharmacy reflected on the impact of quarantine on their mental health and well-being and said they are optimistic for the future of the pharmacist's role in health care following the COVID-19 pandemic.

For students living in Texas during the pandemic, there were additional challenges in the form of the deep freeze experienced throughout the state in February 2021. Kailee Marikar, a PharmD candidate at UT Austin, said balancing her family's needs in those conditions was no easy feat.

"I have a 3-year-old daughter, and this year was challenging to say the least," Marikar said. "I was battling the pandemic and the deep freeze, and we lost water at our home for 7 days. We had the power going in and out. There were times when I felt really stressed trying to take care of my family [and] keep up with my coursework."

In spite of these challenges, Marikar was able to balance her home life and work life, taking on the adversity of the past year 1 day at a time.

"My strategy was to take it day by day," Marikar said. "I tried to set a routine and set hours from 8:00 to 5:30. When 5:30 hit, I would try to put my laptop away. We did start some new routines; we'd go for a walk after dinner or try to plan a new hike on the weekend to help me unwind. I think that helped a lot, because this year it was really easy to get overwhelmed."

Managing mental health was a consistent struggle for many pharmacy students. With an entirely new work-life balance arrangement to adjust to and a quarantine to adhere to, the participating students noted that learning how to cope was a unique challenge for them.

"It was definitely very on and off for me," said Sadaf Helforoosh, PharmD candidate at UT Austin. "I would get into these moods where I was like 'everything is self-care,' then I would go on the opposite end, and I wouldn't even take 5 minutes for myself over a few weeks."

Helforoosh was able to learn how to balance her time as the pandemic continued, despite the lack of physical separation between her home life and work life. She said she remains optimistic about her ability to maintain a solid work-life balance even as classes return to an in-person environment.

The pandemic also afforded students the opportunity to be directly involved in COVID-19 management efforts,

either in the form of rapid testing sites on campus or vaccine preparation. Hannah McCullough, a PharmD candidate at UT Austin, felt she was able to make a difference during the pandemic by working at a rapid preventive testing site.

"It was just people who were on campus doing their part and making sure they weren't accidentally, asymptotically spreading COVID-19," McCullough said. "It was really cool to be a part of that and work with people who were trying to do their part, being really safe and proactive."

Agaustin Wong, PharmD candidate at UT Austin, had the opportunity to volunteer with other pharmacy students in preparing vaccine doses.

"It makes [us] feel like we're really helping people, making a change or making a difference despite the pandemic," Wong said. "This pandemic takes a toll on everyone, and having that sense of protection from the vaccine can give everyone hope that we're moving forward from this."

Looking to the future, the students expressed hope that the visibility given to pharmacists by the pandemic will help the public acknowledge the many skills pharmacists have at their disposal, as well as their position as the most

accessible health care provider. Cara Rutledge, PharmD candidate at UT Austin, shared her hope that COVID-19 taught the public how critical community pharmacists can be during public health crises.

"I hope pharmacists don't stop here," Rutledge said. "COVID-19 was a great test for pharmacists to show what we know and how we can contribute on the team. We don't just count pills, obviously, and we're not just a vaccinator. I think the roles will only get bigger and better."

Helforoosh expressed a similar sentiment, highlighting how pharmacy technicians were given responsibilities during the pandemic after years of advocating for them. She said that technicians were able to prove themselves effective in these roles, and that the best way to move forward is to leverage that success into a push for even greater responsibility.

"I hope people see how much more pharmacy can actually be," Helforoosh said. "I hope they take what we've done, run with it, and grow our field with that, because that's the only way we're going to advance our field."

To view the *Pharmacy Times® Student Café* series, visit <https://www.pharmacytimes.com/interviews>. ■

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