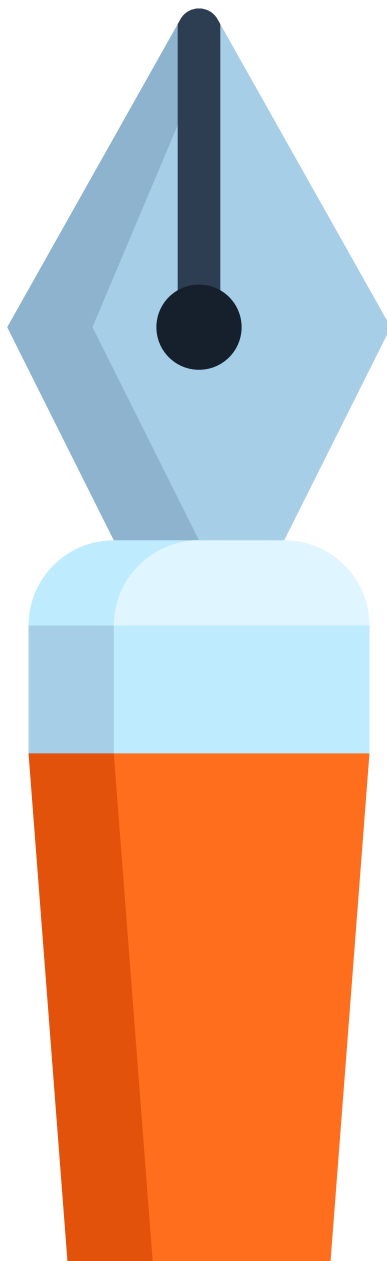


PEN

Pharmacy Education Newsletter

ISSUE #09



International
Pharmaceutical
Students' Federation



International
Pharmaceutical
Students' Federation

Established in 1949, IPSF is the leading international advocacy organisation for pharmacy students and recent graduates with the aim to promote improved public health through the provision of information, education, and networking opportunities as well as a range of publications and professional initiatives.

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Pharmacy Education Newsletter

ISSUE #09



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Letter from the Editor

Hello and welcome to IPSF's **09th** Edition of the Pharmacy Education Newsletter (PEN)!

My name is Jenna Esteban Villarba and I am a pharmacy student at the University of Manitoba from Winnipeg, Manitoba, Canada. This year, I had the amazing opportunity to work with IPSF as the PEN Editor for the 2018-2019 mandate. I am extremely honoured and excited to share this edition with you, creating a platform for our amazing members who have contributed to this edition from all over the world!

To begin, PEN is an educational/scientific newsletter created by IPSF to aid pharmacy students in acquiring knowledge about pharmacy and pharmaceutical sciences education. Its first issue made its rounds in October 2012 to present and share articles that raise awareness on subjects related to pharmaceutical education. This year, PEN brings together a diverse range of subjects, providing perspectives on relevant student issues and keeping students updated on the projects and initiatives of the Pharmacy Education Portfolio within IPSF.

Within this edition, you will find student reports and perspectives, educational innovations, and information on topics such as career paths in pharmacy. We also have a special interview from one of our members who completed a Patient Safety Internship with the World Health Organization (WHO) this year! I hope that you find this edition unique, interesting, and informative, as we celebrate the articles written by our IPSF members from across the globe.

Lastly, I would like to thank and congratulate the authors for their great contribution to this edition and I hope you sincerely enjoy its contents! If you have any topics you'd like to see in future editions, feel free to contact IPSF's editorial coordinators for additional information and discussion.

Viva la pharmacie!

Jenna Esteban Villarba

Table of Contents

Life as a student in Pharmacy School.....	6
International Exposure Is Pertinent For Personal And Professional Development....	8
Education Innovations.....	10
Beyond The Books: A Glimpse Into NUS Pharmacy's Curriculum.....	12
Pharmacy Operations Internship.....	14
Introductory Pharmacy Practice Experience at MD Anderson Cancer Center.....	16
Career Paths in Singapore.....	18
Pharmacists: A Profession People Trust.....	20
Interview: WHO Patient Safety Intern.....	24

LIFE AS A STUDENT IN PHARMACY SCHOOL



ASONYE RUTH

300 LEVEL

DEPARTMENT OF PHARMACY

FACULTY OF PHARMACY

UNIVERSITY OF PORTHARCOURT

NIGERIA

The expectations of every first-year pharmacy student are to graduate and become inducted into the pharmacy profession in due time. It is usually thrilling to see senior colleagues and wonder, "I just got started. When will I ever get to that level?"

It is, of course, a gradual process that requires perseverance and hard work. In my school, there is a popular slogan that goes: "PHARMACY IS YOUR SECOND GOD".

This means that, after your God or religion, pharmacy owns your

devotion and deification. It is essential for survival in pharmacy school. By survival, I mean to successfully overcome the hurdling challenges that are double-barreled to life in pharmacy school.

What are these challenges?

Some challenges are common to pharmacy schools in general and have even become considered as more or less conventional, but there are some others that are unique to my school, the Faculty of Pharmacy at the University of Portharcourt. I will discuss the latter.

CROWDING

Many individuals who have developed an interest in studying pharmacy are fortunately admitted at once into the Faculty of Pharmacy. While this is a positive step that calls for momentous celebration, these new students may have to be combined with students repeating classes that fall back to meet precedent levels. As a result, classrooms become overcrowded. The number of students per teacher ratio is therefore inadequate, thus making learning more difficult for students and teaching for lecturers. This can be handled by regulating the number of intakes per session to strike a reasonable balance. More infrastructural facilities can also be provided to accommodate the increased number of students for efficacious learning.

TIGHT SCHEDULE

An average pharmacy student in my school has a daily routine of "class to the hostel/lodge" and vice versa. This stems from a tight curriculum that barely leaves time for other extracurricular activities. Students need to be actively involved in other wholesome activities either individually or collectively in order to create a balance. They need to be oriented to realise that there is life outside pharmacy school and there is more to life than all that is to be taught during lectures. As the popular proverb says, "All work and no play makes Jack a dull boy".

DEPRESSION

This might be peculiar to many students, owing to various circumstances. In pharmacy school, however, a lot of students fall into depression due to poor grades. This is particularly the case when a student has to repeat a class. Often times, they lose their initial zeal and give up on their goals to become pharmacists. Course level advisors, as well as fellow students, should always look out for the interests of other students for possible detection of depression and prevention of its after-effects in order to reaffirm our burning zeal and love for this noble profession.


Everything we experience today is shaping us to become better pharmacists tomorrow. With dedication and hard work on the part of every pharmacy student, we would gladly share in the sentiment that...

PHARMACY IS A FINISHED WORK!

International Exposure Is Pertinent For Personal And Professional Development



I traveled out of my country for the first time in 2017, for the 7th World Healthcare Students Symposium (WHSS) in Kigali, Rwanda. This was a life-changing experience for me, as it exposed me to people of diverse cultures and backgrounds. The theme of the symposium was 'Towards the Sustainable Development Goals (SDGs) agenda: the role of a multidisciplinary approach in healthcare'. It was both a joy and an inspiration seeing pharmacy students like me executing such a world-class event. WHSS 2017 was hosted by a member of the International Pharmacy Students' Federation, Rwandan Pharmaceutical Students' Association (RPSA). I was one of six pharmacy students who was sponsored by my university to attend this event.



The plenary sessions bordered on different topics ranging from the SDGs to the use of technology in healthcare systems, with several different workshops and hackathons as well. I made new friends and enjoyed the Rwandan dishes as well as the accommodation at Hilltop hotel. This event made me realise my love for being in international settings where different people from different countries work, learn, and celebrate knowledge together.

My second international experience was in the Benin Republic for a cultural immersion program. I enrolled in a Language for Humanitarian Diplomacy program organised by Building Nations Initiative (BNI), a non-profit organisation geared towards youth development. I learned French during this program, with the help of a cultural immersion program in the Benin Republic, a French-speaking country that shares borders with my country, Nigeria. I spent one week there, practicing the French I learned while communicating with the people there.

Furthermore, the Federation of African Medical Students Association, a friend of IPSF, had their 32nd General Assembly in my school, University of Ibadan, Nigeria. Although this was held in my home country, it was another opportunity to relate to healthcare students and professionals from other countries. The theme of the event was 'Repositioning Healthcare in Africa for Sustainable Development'. Topics of plenary sessions bordered on mental health, vaccination, communicable and non-communicable diseases, and infant and maternal health.

International conferences are important for us as pharmacy students. The practice of medicine and pharmacy is a global one, and these international exposures help us see what the rest of the world is doing and how we can improve ourselves and the profession in our respective countries of residence. However, the majority of pharmacy students in Nigeria do not have these opportunities for international exposure due to financial constraints. It will be helpful to sponsor students for such IPSF events like the Student Exchange Program, perhaps to neighboring countries to reduce the cost of travel. While one can grow while living, studying, and working in one's country, visiting other countries is an experience that provides extraordinary and unique opportunities. The new people and interactions, the new places that one visits, and the new perspectives to things that are seen in other cultures are all important in building an individual into a well-rounded person and a global citizen.

Education Innovations



Li Chujie

The Department of Pharmacy of the National University of Singapore places an immense emphasis on experiential learning, where students are encouraged to pursue learning outside of theoretical knowledge and textbooks. These “outside of the classroom” learning opportunities offered by the department ranges from the Pharmacy Professional Skills Development (PPSD) modules to the volunteerism events hosted in conjunction with other faculties or institutions.

According to the Pharmacy curriculum, all pharmacy students are required to complete the PSD modules which encompass the practice of medication reconciliation, medication picking and packing, patient counselling, and dispensing. Facilitators are invited to play the role of patients, and the students are tasked with the evaluation of these patient cases, emulating a real-world setting. These could include identifying potential drug-related problems, practicing SBAR interventions, as well as documentation in relevant records. All this coursework aims to equip students with the relevant skills in clinical practice in order to introduce them to the most basic competencies required to practice professionally, in addition to internships.

In 2016, the Department of Pharmacy created a new method to educate students on these professional skills through a virtual game named RetroZfect. According to Yap (2016), the game incorporated both entertainment and education to stimulate students’ interests in professional practice. Players were situated in a post-zombie apocalyptic world where students collaborated in teams to construct the pharmacy and virtual patients, which allowed them to hone effective communication skills. The game also took the players through the various stages in a pharmacy, from receiving a

prescription from a patient to extemporaneous preparations compounding, and finally to the dispensing and patient counselling stage. The game resulted in students being able to gain professional confidence in a more comfortable environment, allowing them to make mistakes without harming any real patients. This provided a conducive platform for the students to learn from their mistakes and exposed them to certain aspects of patient care.

Aside from education in the classroom, students are encouraged to participate in volunteer activities. One of the more notable events in Singapore is called Know Your Medicine, Get it Right! @ North West, which is a ground-up initiative by the Pharmaceutical Society of Singapore and the NUS Pharmaceutical Society. The program involves inviting practicing pharmacists in Singapore to conduct medication reviews for the residents in nearby neighborhoods and counsel the residents on proper medication use and storage. Health awareness talks are also provided along with free health screening services such as height, weight, body fat, and blood glucose measurements. Pharmacy students are allocated to assist the pharmacists and gain a better understanding of the responsibilities of a pharmacist while observing how patient-interactions are conducted. The interactions with the residents

are also beneficial in helping both pharmacists and pharmacy students to understand and acknowledge some of the common medication problems faced by the residents, which can include non-compliance, medication cost, or adverse effects. Pharmacists can then offer counselling to help the residents manage their health conditions and medication use. Consequently, students are provided with the opportunity to experience and learn about professional patient interaction and communication.

All in all, students are encouraged to pursue learning beyond the classroom, with the provision of ample opportunities to receive not only education relevant to professional skills development but also service education. As Aristotle succinctly puts it, **“educating the mind without educating the heart is no education at all”**.

Li Chujie

Beyond The Books: A Glimpse Into NUS Pharmacy's Curriculum



The National University of Singapore's (NUS) Department of Pharmacy provides its students with a broad-based four-year course with a curriculum designed for students to be well-versed in the areas of drugs, products, and patient care. The curriculum includes three years of didactic coursework, followed by 6 months of internship and 6 months of a Final Year Project (NUS Department of Pharmacy, 2019). Academics aside, students can also enjoy various opportunities beyond the realm of academia to nurture themselves in aspects such as leadership and organisational skills to develop themselves holistically.

In NUS, the pharmacy student body forms the NUS Pharmaceutical Society (NUSPS), which is managed by the Executive Committee. NUSPS has multiple sub-committees for its student body to contribute towards it. Committees include welfare, academic, international relations, essential medicines, pharmacy professional awareness, media resources, marketing, and the administrative team. Besides these, students can also be involved in various annual special projects such as the Freshman Orientation Programme, Interprofessional Education, and Youth Expedition Project.

The Freshman Orientation Programme is what freshmen look forward to as their inaugural event in University. The National University of Singapore Student Union (NUSSU) organises an annual charity project, "Rag & Flag", a prominent feature of the NUSSU freshmen orientation program. This project comprises two components, Flag Day and Rag Day. On Flag Day, undergraduates go around various areas of Singapore with their course mates

to collect donations from the general public to raise funds for about 20 beneficiaries supported by the Community chest. Thereafter, on Rag Day, students perform an array of dances as a faculty, while displaying their hand-made floats for the NUS community and the public to enjoy. Leading up to this day, the Rag dance committee works tirelessly to choreograph stunning performances whilst the engineers and designers put their creative juices and motor skills to the test to build their floats with the freshmen. The “Rag & Flag” project marks the very start of the Freshmen’s university life and enables both the Freshmen and Sophomore to develop a sense of altruism by contributing to the underprivileged, as well as nurture a sense of camaraderie as they work together to put up stunning performances.

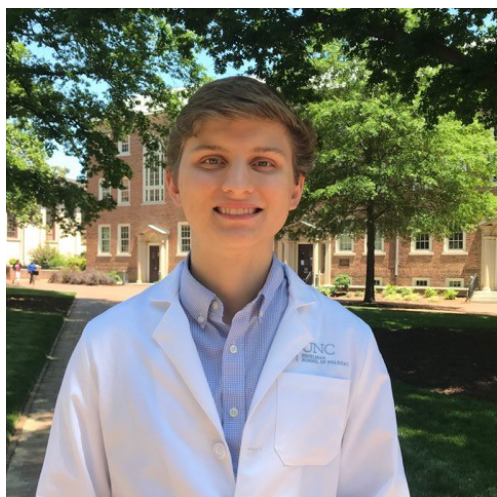
NUSPS also prides itself on its annual Youth Expedition Project: Dispense a Dream, where about 20 students fly abroad to countries such as Cambodia or Laos, to engage and serve the communities there. Students impart their knowledge in English, Science, Math, and Art through creative and interactive lessons for the children in the local schools. Not forgetting to relay the importance of healthcare, teams which have gone on the trip have also conducted sessions for the children on hand hygiene through proper hand-washing techniques, nutrition through understanding the food pyramid and healthy living through exercise. Students who have embarked on this project have also testified how eye-opening and insightful their trip was and how it has altered their perspectives on giving unto others. After all, “It is better to give than to receive” is a motto that pharmacists should also live by as we serve patients and work towards the betterment of patients’ health.

Throughout the year, many other community outreach opportunities are made available for students to participate in. One such opportunity is Project Silvercare, an annual health screening which aims to reach out to frail and at-risk seniors in order to help them overcome the biopsychosocial barriers to healthy aging. Pharmacy, nursing, and medical students collaborate to bring the seniors through a series of assessments such as the visual acuity test, blood pressure test, and frailty test. Projects such as these provide insightful exposure for pharmacy students through interaction with other healthcare professionals and members of the public about health-related issues.

On top of school-based activities, students can also sign up for attachments in various hospitals or retail pharmacies, as well as experience interning in pharmaceutical industries such as Johnson & Johnson or GlaxoSmithKline. Job shadowing opportunities in the inpatient and outpatient departments of hospitals allow students to observe and learn first-hand from pharmacists and other healthcare professionals. In the industries, students could venture into fields such as Pharmacovigilance, Marketing, and Regulatory Affairs, to expand their horizons and explore ways to put their pharmaceutical knowledge to use in indirect patient care sectors.

In summary, although the importance of a good grasp of pharmaceutical knowledge cannot be undermined, student education is not merely restricted to the realm of academia. Besides nurturing competent and knowledgeable pharmacists, these aforementioned projects, events, attachment and internship opportunities available for students to be involved in and contribute towards, provide ample experiences to develop them to be more well-rounded individuals. As pharmacists-to-be, it is paramount that we work on developing both our hard and soft skills through being involved in such projects and to always strive to be a better version of ourselves, both in knowledge and character.

Pharmacy Operations Internship



Ethan Brenneman

IPSF VP Eshelman School of Pharmacy
Chapel Hill, NC USA

Jobs in pharmacy are increasingly competitive in the United States as more pharmacy students are graduating relative to the jobs available (Vecchino, 2017; Barker, 2016). When I was accepted into pharmacy school, I knew that because of the increased competitiveness of this profession I needed to be proactive about gaining experience to make myself a strong job candidate upon graduation. I also wanted to become involved in patient care as soon as possible. As a result, before starting classes, I applied to several internships and pharmacy technician jobs. Through rigorous preparation and a positive interview, I earned an internship in the summer of 2017 as a Pharmacy Clinical Intern with the Inpatient Operations Pharmacy at a nearby hospital. As part of my role, I have experienced working in pharmacy operations with involvement in various clinical and operations projects at the hospital.

Through this internship, I have grown personally and academically. I have learned to think critically about the role of a pharmacist in a hospital setting. Pharmacists frequently reflect inwards at work, focusing on their role in dispensing medications and preventing errors. While introspection is an important element of the job, inward thinking limits improvements to the healthcare system because it does not take into account the entire pharmacy team. Participating in this internship has taught me how to look at the larger picture of operations and consider possible improvements that benefit the entire team. One way I learned to look at the big picture of operations is by participating in clinical and operations projects. I provided assistance on a project designed to optimise the flow of non-patient specific medications in order to improve workflow for technicians. By analysing the medication dispensing data, the

hospital shifted which medications were stored on each floor, lowering the amount of patient-specific medications that had to be filled each day. This change decreased the workload for pharmacy technicians and minimised errors as fewer patient-specific orders were filled (Garcia and Achey, 2018). Participating in these projects shifted my thinking from my individual role in operations to the broader operations process and how it can be improved. While working as a pharmacy technician, I have also developed an understanding of the role technicians play in hospital operations, which can often be overlooked from a pharmacist perspective.

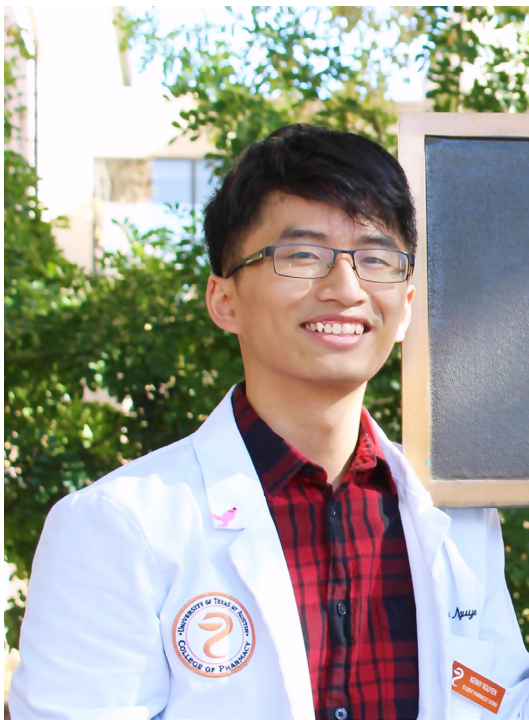
Working in a hospital has helped me grow academically by allowing me to apply classroom lecture material into practice. When filling medication orders, I often look at the medication order and evaluate the name, indication, and dosing regimens. This has been more effective for learning drug brand and generic names than reciting information from a textbook. Applying what I learn in practice has helped put what I am learning into context. Drug knowledge is central to most aspects of pharmacy and is needed in operations to be able to quickly and safely check each order for errors. Being able to practice so early in my studies has accelerated my learning and helped me find success both in the classroom and in my internship.

One way I was able to improve patient care in my internship was through a clinical project on leech therapy (Guthart et al., 2018). In this

project, our team evaluated the hospital's antibiotic choices and regimens in patients on leech therapy to evaluate their effectiveness and safety. I reviewed patient profiles and analysed their charts and medication histories. Gaining experience reviewing patient profiles is valuable because it helps a clinical pharmacist understand the context of a patient's medications to be able to thoroughly evaluate the medication order. Understanding how to create and write a clinical project is also important as participating in these projects is something a pharmacist can do their entire career to advance patient care.

Taking time out of my weekends has been a sacrifice to my free time during pharmacy school. However, the experience I have had working and participating in these projects has been irreplaceable. In addition to building a stronger resume for when I graduate, I have developed the skills required to improve patient care. Although many clinical pharmacists have strong clinical skills, they often do not appreciate the intricacies of getting a drug to the floor. In order for a pharmacy to be successful, all pharmacists in a hospital must understand drug distribution. By improving workflow for pharmacy operations, learning to quickly identify drug indications and dosages, and understanding how to pull the necessary information from patient charts, this internship has taught me how to distribute medications more efficiently and improve patient care.

Introductory Pharmacy Practice Experience at MD Anderson Cancer Center



Kenny Nguyen

Third-year PharmD student at the University of Texas in Austin, United States

My name is Kenny Nguyen and I am currently a third-year PharmD student at the University of Texas in Austin, United States. My Introductory Pharmacy Practice Experience (IPPE) was at the MD Anderson Cancer Center in Houston, Texas. IPPEs are usually completed within the first three years of pharmacy school in the United States and the experience will vary by hospital and preceptor. My preceptor was Chidebem Nwosu who is an assistant manager for the inpatient pharmacy department. Prior to my IPPE, I have had several shadowing opportunities at other hospitals in Houston in different areas in the hospital including pharmacy. However, this experience at MD Anderson allowed me to gain a deeper appreciation and understanding of how the inpatient pharmacy department operates and fits into the workflow of the institution.

I was not aware of the many administrative aspects of the institution such as understanding what the joint commission was responsible for, how the investigational drug studies were conducted, and the workflow of having pharmacy satellites on various floors. After learning about these aspects of the institution, I began to understand the bigger picture of how and why the hospital operates the way it does. Also, I began to see the importance and stringencies of the protocols in place to ensure high-quality patient safety and care. During my rotations, I was able to learn how to navigate and use the electronic health records, gain knowledge on hazardous and non-hazardous compounding, as well as learn from pharmacists on different floors which included pediatrics, operating room, total parenteral nutrition, intensive care unit, and emergency room. I also attended a meeting with the Pharmacy and Therapeutics Committee, which allowed me to see how medications were added to the hospital's formulary. At the meeting, physicians and pharmacists discussed the use of biosimilars such as Zarxio, a biosimilar that will be substituted for Neupogen, in order to save the hospital several million dollars a year among other agendas. It was interesting to see how the various professionals in the institution came together to make these important decisions.

I began getting interested in the Investigational Drug Department after seeing many patients' chemotherapy treatment plans, looking into the clinical trials, and the protocol datasheets. It was a fascinating aspect of institutional pharmacy practice that I was not aware of before my IPPE and it would be great to gain more exposure to this area of practice. I was also interested in the oncology pharmacy department and I had the opportunity to sit in with Post-Graduate Year 2 Residents (PGY-2) oncology residents to work on patient cases in the oncology forums. We covered the treatment of brain tumors in the pediatric population. The administrative pharmacy was another area I was able to learn about through my preceptor as a manager. I was able to learn more about administration operations, medication management and finances, quality improvement initiatives, and medication safety and compliance.

With my current interest in pursuing residency and working in hospital pharmacy, my experience at MD Anderson was an overwhelmingly enriching experience. I was able to learn and understand hospital protocols, pharmacy workflow, pharmacy satellite units, and specialties operations, and learn from other health professional disciplines like nurses and respiratory therapists. Importantly, I was able to learn how other health professions worked together with pharmacists to deliver patient-centered care. I was able to learn more about cancer treatments, how to look at and treat patients holistically, utilise pharmacotherapy knowledge and evidence-based resources, and understand the necessary skills to succeed in institutional pharmacy from shadowing various pharmacists. I was able to see how different pharmacists solved various clinical problems using their judgment and value as a clinician in those decision-making processes. I believe that this experience at MD Anderson has reinforced my interest in hospital pharmacy and pushed me to continue to pursue a career in this field, and I will take all I have learned with me to future practice.

Career Paths in Singapore



Ming Hui Ooi

The Pharmacy curriculum at the National University of Singapore (NUS) is as intense as it can get. Ranging from Pharmacotherapy to Formulation & Technology, NUS Pharmacy is offering highly specialised and flexible training to students. The curriculum trains students to become fast learners, critical thinkers, empathic communicators, and team players, all of which are valuable traits in the workforce. Despite having a specialised degree, graduates can venture into many different sectors and find passion in various professions that engage in either direct or indirect patient care. While career prospects do depend on the interplay of demand and supply, it may be safe for us to say that 'where mankind needs medicines, there will always be the requirement for an expert in them' (Lowe, 2018).

Direct Patient Care (Clinical Routes)

Pharmacists working in direct patient care are mainly concerned about the rational use of medications in the holistic treatment of an individual's well being. They also work to ensure the safety, efficacy, and quality of medications before being administered.

Hospital and Acute Care: In this sector, pharmacists are valued team players in multi-disciplinary healthcare teams comprising of doctors, nurses, and other healthcare professionals in the promotion of patient-centered care. Hospital pharmacists spend much of their time in the wards conducting medication reconciliation and patient interviews, attending ward rounds, and carrying out dispensing duties in the pharmacy. Hospital pharmacists are highly valued for their knowledge in drug information, particularly doses, drug interactions, as well as adverse events and toxicity profiles for use in different groups of patients.

There are numerous opportunities for career advancement in this sector. Hospital pharmacists can eventually take up responsibilities in pharmacist-run clinics such as Anti-Coagulation Clinics and Oncology Clinics for the independent management of patients or in specialised services such as the hospital's Antimicrobial Stewardship Program, or be part of the Operations and Supply Chain Management team to facilitate more efficient patient care in the pharmacy.

Community Care and Primary Health: In this sector, community pharmacists play an important role in working in the frontline of healthcare and in the heartlands. They are trained to recognise signs and symptoms that the client presents with, which are crucial in triaging conditions and escalating healthcare to doctors and emergency departments. They are also trained in counselling skills to professionally advise and recommend appropriate products for clients that present with minor ailments appropriate for self-treatment. Community pharmacists hold diverse responsibilities, as they not only dispense medications and carry out medication-related services such as prescription-filling, but also run specialised health services such as Smoking Cessation, Wound Care, and Diabetes Care programs.

Indirect Patient Care (Non-Clinical Routes)

Pharmaceutical Industry: This is another growing sector that has caught the interest of many pharmacy graduates due to the vast opportunities to work in different companies' departments. For example, graduates can join pharmaceutical companies as part of the Regulatory and Pharmacovigilance team, Medical Affairs team, Marketing and Sales team, and even the Clinical Trials team, in an effort to help market the company's pharmaceutical products in compliance with Singapore's regulations. Pharmacists working in this sector find passion in indirect patient care, promoting and developing medicines that benefit society despite working in a competitive landscape.

Regulatory Pharmacy: In this sector, graduates look forward to working in the governmental regulatory agency (Health Sciences Authority in Singapore) to be part of the leading force in regulating health products within Singapore's market. Regulatory pharmacists can venture into the scope of Pharmacovigilance, Quality Assurance, Applied Sciences, etc. to ensure the use of safe, efficacious, and quality products in the country.

Research and Development

Other than the above sectors, graduates can also pursue their interest in Research & Development of new drugs, especially in the incoming era of pharmacogenetics and personalised medicine. Pharmacy graduates can also work in publications, write about research findings, medical and public health information or in Academia, to contribute to the learning and development of prospective students.

Each career path has its own rewards and challenges. It is important for us to keep an open mind to embrace life-long learning in all career pathways, so as to be updated in our care for our patients, be it in the area of therapeutics or health technologies. What we can do as students can include actively seeking new opportunities in internships and job-shadowing in the different sectors. It is only through such interactions and experiences that we may broaden our knowledge and reflect on which aspect of pharmacy practice we are truly passionate about.

Pharmacists: A Profession People Trust



Chantley Thomas

According to the results of the latest Gallup poll on honesty and ethics of healthcare providers, pharmacists are consistently ranked among the most trusted professionals, and research shows high levels of satisfaction with services rendered by pharmacists. Pharmacists are one of the first points of contact patients have with medical practitioners. Due to the respect endowed to the profession over time, patients have developed strong relationships with pharmacists. In the context of pharmacy, professionalism has been regarded as a binding contract that pharmacists have made with society. It demands that servicemen in the field should put the interest of the clients before their own interests. Certainly, responsibility and adaptability are the main pillars of

professionalism in pharmacy. Thus, students are required to possess these valuable qualities as they move forward in their careers as pharmacists.

Responsibility and professionalism

Responsibility is a value that cuts across all professions. However, pharmacy is seen as a profession which should be held a high degree of responsibility by candidates. An analysis by Roth and Zlatic demonstrated that responsibility demands pharmacy students to go beyond the scope of their duties both inside and outside of the classroom to ensure that they handle what is required of them. There are several constructs that are related to the ideology of professionalism concerning responsibility. As indicated by Roth and Zlatic, most of these concepts are overlapping in nature. Responsibility as a fundamental of professionalism in pharmacy starts all the way from teaching and class

attendance. For instance, students are deemed to express professionalism if they take responsibility for attending all classes without being reminded. It implies that one must be self-driven and conduct oneself in a manner that does not require one to be reminded of what to do. Within the learning environment, the signing of the register and submitting all the assignments are among the student's responsibility. Finally, all students are responsible for academic honesty. Thus, any plagiarism and other forms of academic misconduct will not constitute ignorance. The achievement of professionalism is a continuous process, and it begins with the ability to take responsibility and be accountable for one's actions. The Pharmacy Code of Ethics has stipulated several requirements that a pharmacy student must adhere to in order to become professional. These requirements have been discussed in the pharmacists' guidelines to practice. The most evident expectations of a pharmacist include, but are not limited to, the maintenance of professionalism through attitudes and appearance, adherence to policies and pharmacy guidelines, accountability for one's decisions and actions, and to uphold the confidentiality of patient information. Student professionalism, attributed to responsibility, is greatly influenced by the environment, such as educators, peers, practice environment, and an understanding of the institution's expectations. But, to get all these precursors of professionalism, students may be required to go beyond the normal call of duty. In doing so, pharmacy students are encouraged to become accountable and take a conviction of conscience. Professionalism among pharmacy

students can be seen in the field when they encounter patients and other professions. In one study that focused on professionalism in pharmacy, the authors concluded that responsibility is an asset among the students when it comes to reporting medication errors and attending the patients in accordance with the Code of Conduct. According to the American College of Clinical Pharmacy, pharmacy students cannot become professionals if they do not display characteristics of responsibility. In this context, responsibility was measured regarding the ability to respect the patient-pharmacist relationship, dignity, and autonomy of the client, commit to client-based service, and maintain the confidentiality of the patient.

Adaptability and professionalism

Adaptability is the most desirable, employable quality considered by most employers. The ability of a pharmacy student to adapt to changing clinical expectations and situations makes such candidates valuable in today's modern, fast-paced environment. Thompson et al. conducted a survey that aimed to determine the characteristics desired by the pharmacy community. An instrument with 20 items was sent to licensed pharmacists in Colorado. Results demonstrated that institutional pharmacists and retail pharmacists highly valued adaptability. The argument was that individuals who are highly flexible could adapt to various situations presented by the environment. There is a general acceptance that professional pharmacists are highly adaptable. However, variation in response was noted across the practice sites as well as in managerial responsibilities. Significantly, it is

noted that patient ailments continue to evolve. Thus, pharmacists must be well-prepared to counter these changes. Also, it has been observed that pharmacy is a dynamic profession and individuals within the field can be relocated to different geographical areas with different environmental and anthropogenic conditions. Therefore, one should be well versed with different conditions to administer services effectively. Hence, it is necessary for a student to be able to cope and adapt to various situations.

There is a synergistic relationship between pharmacy student professionalism and adaptability based on task engagement. A growing body of evidence suggests that highly adaptable pharmacy students display a high degree of duty engagement compared to less adaptable individuals. Flaherty used an engagement framework to analyze data derived from 1,405 pharmacy students across seven different pharmacy schools to determine the relationship between student engagement and professionalism. Among the studied population, adaptability was reported among the predictors of professionalism among the pharmacy students. The skill of adaptability increased the ability of these students to interact with various clients with different needs. Also, the study noted that the ability to adapt and interact with various patients and professionals reduced the chances of friction and eliminated the consequences of burnout and compassion fatigue.

Conclusion

Pharmacy is a critical profession that requires careful consideration of various factors for a student to be identified as a professional by the pharmacists' body. Various core values are observed by the pharmacists to ensure that the interests of the patients are served first. Certainly, responsibility and adaptability are among the top values that are embedded in pharmacy ethics; responsibility ensures that a pharmacy student becomes accountable to the health status of the client. On the other hand, adaptability enables students to accommodate different conditions and integrate with cultural diversity. The assemblage of the two elements constitute the qualities displayed by the internationally-recognised pharmacy professional.

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INTERVIEW



Interview: WHO Patient Safety Intern



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1. How did you find out about the internship?

I originally found this position whilst visiting the WHO website for another reason and happened to see the “Careers” page. I’d been hoping to work for the WHO for a long time and I was so motivated to see the position had become available, via a forwarded email from the Malaysian Pharmacy Students’ Association (MyPSA) committee member. I reviewed the scope of the internship and the requirements of this position before applying and it seemed like a great fit for my background.

2. From your experience, what was the application process like?

The application process may seem intimidating, thus it is advisable to get started with a to-do list with the following:

- A curriculum vitae (CV) in English (maximum 2 pages)

- A cover letter in support of the application mentioning the areas of interest and motivation for applying (maximum 2 pages)

- Enrolment letter from the university (certified by the Dean or head of study program), or a Diploma for recent graduates

- Confirmation of membership in IPSF (from your Contact Person, or the Internal Chairperson if you are an Individual Member)

This process had four key phases:

- Application to the IPSF Internship Coordinator
- Application through the Global Vacancy Notice posted on the WHO Careers site
- Interview by the Technical Unit
- WHO onboarding process (prerequisites together with other tasks)

Application to the IPSF Internship Coordinator

The electronic copies of the full application were submitted to IPSF Internship Coordinator at internship@ipsf.org in a timely manner. The application was standardised in PDF format and was only considered if all relevant documents were included.

Application through the Global Vacancy Notice posted on the WHO Careers site

The application was made through the Global Vacancy Notice posted on the WHO Careers site using the WHO corporate recruitment system (Stellis). This required completing a profile on Stellis that covered personal information, eligibility questions, education, language skills, preferences on the area of work, and experience including all the other credentials. A cover letter stating the motivation to apply for the position and curriculum vitae was uploaded. The full process was outlined on the WHO website.

Interview by the Technical Unit

When shortlisted for the internship, the candidate was contacted by the Technical Unit to discuss the Terms of Reference of the position and conduct an interview.

WHO onboarding process (prerequisites together with other tasks)

When selected for a WHO Internship, proof of enrolment in a course of studies, a medical certificate of fitness for work, a proof of personal medical insurance (illness) coverage (which included Switzerland) was provided and a Declaration of Interest was completed. Once the onboarding process was complete, an offer outlining the Terms of Reference was sent via email.

3. What was your background before applying for this internship?

I was a final year student of Bachelor of Pharmacy (Honours) at Management and Science University (MSU), and I completed seven semesters of higher education when I was applying for the internship. The theoretical knowledge I gained in university and the internship experience I had every semester break contributed greatly to the development of my interpersonal skills and the essential skills required for the profession.

4. What skills or characteristics do you feel contributed most to your success in receiving the internship position over other applicants?

My educational background has helped me develop a variety of skills such as the ability to connect with others through interpersonal and communication skills, being meticulous, having strong multitasking skills, as well as teamwork skills, which aided in working closely as a team with other healthcare professionals. The experience I gained from my previous internships was the ideal preparation for the position. My strongest attributes are determination, dedication, and passion which prominently fit the internship position. I take on every task head-on and do what I need to accomplish my goals even when the task is challenging. Besides, I've always been a reliable and dedicated

intern who wants to do my absolute best for the organisations, hospitals and pharmaceutical industries I work for.

5. Were there any obstacles to achieving this position?

Fears and inner voices. Thoughts and voices that popped into my head telling me all the reasons why I should not attempt this and all the rationalisations why it was not possible to achieve it. When I decided to apply for this position, I was experiencing a lot of fear and thoughts that held me back. As soon as I realised that those fears and voices were motivating forces and obstacles to success, I trained my mind to be more positive and made the switch by obliterating those obstacles.

6. What were your expectations for the internship? Were they met?

During the course of the internship, my expectations were to be able to attend meetings and events that would allow me to meet and network with a lot of healthcare professionals, to work on team-based projects in order to enhance teamwork skills as well as communication skills, to acquire references and explore new opportunities, to strengthen my interpersonal skills in all aspects of projects development, and to acquire knowledge on new scopes to improve health that will serve as an inspiration for new initiatives. The internship definitely met and superseded my expectations. The projects which I had been assigned to allow me to interact with professionals with different backgrounds from all over the world and hone my communication skills in a professional environment. One of the most significant aspects that exceeded my expectations was the positive working environment that introduced me to a lot of useful resources and helped me acquire a professional mentor.

7. What was your experience during the internship? What did a working day look like for you as an intern?

It was the insightful experience in a positive working environment and the fun learning culture of the organisation which gave me a small taste of the real world. I was exposed to various projects including researching backgrounds for patient safety policies and legislation in countries from all geographic regions, reviewing guidance and tools for the improvement of medication safety in different clinical risk areas and vulnerable populations, supporting the development of the monitoring & evaluation plan for the Medication Without Harm Challenge, supporting the development of the country guidance for the Medication Without Harm Challenge and supporting the review process of WHO Patient and Family Engagement Framework, and finalisation of framework draft after external and internal review and comments. I was allowed to participate in meetings related to the projects assigned to me and biweekly meetings among the team members with the aim of updating the progress of the projects. Skills such as multitasking, communicating, learning to deal with diversity, and dealing with deadlines have been improved and put into practice. Being able to utilise the skills that I was taught in university in real-life approaches was the best learning experience ever. I do believe that the internship completely met my career goals and exceeded my expectations of what great value it would bring to me.

8. What is your favorite thing about your experience?

Of all the activities and tasks during the course of the internship, my favourite experiences were the intern events with my colleagues/team members. There were so many interesting

events, lunchtime seminars and theme-specific workshops that allowed interns across all units and departments of the organisation to participate, interact and network in. It was a golden opportunity to be able to meet and get inspired by undergraduate students and health care professionals from various backgrounds. Furthermore, it is the people that truly make WHO a great place to work at and I could not emphasise enough that the people I met were so diverse, knowledgeable and kind throughout the course of my internship.

9. What is the most important/interesting thing you learned from this experience?

As I reflect back on all that I have learned, the most important thing I learned is that the best way to learn and explore is to ask questions. To be honest, I spent a lot of time getting lost and confused. Everyone has their first time and that can be at any moment, at any age. So, never hesitate to ask questions because supervisors are aware that the interns are there to learn and gain experience. Asking questions will not only show one is willing to learn, but that one is interested in doing their best in any way possible.

10. Is there anything you wish you had done differently regarding the internship?

The one thing that I would have done differently is the duration of the internship. The program was offered for six months and I could only make it for three months as it conflicted with other events in my home country. I thought three months would be enough with the hopes of gaining professional work experience I could use towards achieving my career goals, but what I learned was so much more from each of the various tasks I had been assigned to. I realised I was not only interning for an organisation, but I was also interning to accomplish a mission that was so much bigger than myself and I could not imagine interning for a more worthy cause.

11. How do you aim to use the skills and knowledge you've learned from your internship?

This internship experience is an incredibly valuable opportunity and I feel like I have gained so much real-world wisdom. All the improved skills, as well as the knowledge acquired, will be a great advantage to me in my next work setting with the aim of improving public health. I now feel more prepared to pursue my career, obtain professional goals and to be more passionate about public health.

12. Do you have any advice for students who are interested in applying for an internship program?

The best way to learn is by doing. I would strongly encourage students to apply for as many internships as possible because a hands-on approach is undeniably invaluable and insightful. Students with work experience upon graduation will be highly desired by employers compared to fresh graduates who did not venture into the real-world practicum. Being an intern is one of the best things you could do for yourself as it will be a good dose of reality and of what life will be like upon graduation.

13. Any other comments?

My sincere thanks and gratitude to IPSF committee members for their constant support and I truly appreciate the faith all of them had in me. Without their support and dedicated involvement in every step throughout the process, this experience would never have been possible.