PEER REVIEWED

Utilization Survey of the First Two Cohorts of Optometry Graduates from the University of Medicine Pham Ngoc Thach in Ho Chi Minh City, Vietnam

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Abstract

The first two graduating classes of optometrists at the University of Medicine Pham Ngoc Thach (UPNT) have begun their careers. This study explores what these new optometrists have experienced working within the Vietnamese health system. A survey was sent to the 29 graduates of the first two UPNT classes. Overall, graduates are not fulfilling the role of providing independent comprehensive eye examinations. Graduates are hindered in development by lack of a national optometry law and lack of understanding about optometrists' capabilities, both within the public health system and among the general population. The result is that the graduates feel less fulfilled. Adoption of a job code for optometrists is needed to improve optometric services and professional satisfaction.

Key Words: *education, statute, scope of practice, Vietnam, employment, job satisfaction*

Background

The purpose of this study is to explore what the optometry graduates of the University of Medicine Pham Ngoc Thach (UPNT) have experienced working within the Vietnamese health system. Secondary purposes are to educate the public on the ideal use of the optometrist in the Vietnamese health system and to discuss current barriers to autonomous practice within the public hospital system.

Until recently, eye care in Vietnam consisted only of a limited number of ophthalmologists, working primarily in a problem-focused way, and of refracting opticians at public hospitals and commercial optical shops. The system of ocular care follows the traditional system previously seen in China.[1,2] The opticians perform refractions primarily using trial lens sets; phoropter use is rare. The current quality of refraction varies widely and there is no requirement for formal refractive training. Some of the lower-quality refractions may consist of only a spherical equivalent refraction or a prescription from an autorefractor reading. There has been little preventive eye health and vision care. Furthermore, the more advanced eyecare resources are concentrated in the larger cities, primarily Ho Chi Minh City (HCMC) (south), Hanoi (north), and DaNang (central). As a result of this situation, many conditions such as glaucoma, cataract and retinal breaks progress undetected and untreated, leading to blindness. Early recognition of these conditions can lead to more effective treatment and improved visual outcomes. The lack of ocular surveillance is especially pronounced in the countryside where people need to travel relatively large distances to seek eye care. Optometry is being developed to bring comprehensive eye care and ocular health monitoring to Vietnam to reduce preventable blindness.

Optometry was first introduced to Vietnam as a profession with the graduation of 12 Vietnamese optometrists from the UPNT Optometry program in 2018. The first four classes admitted consisted of 49 females and 27 males. The optometry program awards a four-year bachelor's-level degree following high school. Entrance to both optometry and medical schools is competitive and there is no four-year general education before beginning a course of medical or optometric study. In contrast, ophthalmologists in Vietnam must complete a three-year residency following a four- to five-year course of study in general medicine. Medical students enter their program directly from high school as the optometry students do, and from the same applicant pool. This is similar to many education systems around the world, but unlike American medical/optometric education where an undergraduate degree is generally obtained prior to entry into professional school. There are no separate standardized entrance exams such as the Optometry Admission Test or Medical College Admission Test.

Tuition for the optometry program was subsidized partially by the Human Development Committee of Ho Chi Minh City for the first three years of the program. That support has now ended (recent graduate, oral communication, February 2020). The current tuition paid annually by the students is approximately $500 USD, which covers both semesters.[3] The tuition at the sister program in Hanoi is 10% higher at $550 USD.[4]

The instruction in the UPNT Optometry department mirrors a traditional Western-style optometry school curriculum but with perhaps a greater portion of the first year dedicated to basic science classes such as physics and anatomy. Some political and military training is required, which is standard for all students in Vietnam. The second and third years are intense with didactic and lab instruction in the core optometry subjects, followed by a fourth year primarily of practical clinical experience. The clinical experiences include working within the various departments at the main public eye hospital in HCMC. Unfortunately, the students often only observe and do not participate in the care delivered. The core clinical experience is in the Academic Vision Center (AVC), which was started as part of the general health clinic within UPNT and exists to serve the needs of the medical students and staff of UPNT. Although the facility is open to the public, its current clinic patient base is primarily young, healthy students. The curriculum used for the didactic instruction has been developed by the Brien Holden Vision Institute (BHVI) with the input of recognized experts in optometry from around the world. This curriculum is freely available to all at the BHVI website.[5]

Table 1. Click to enlarge

The founding of the Vietnamese optometry program has been supported by the Vietnamese Ministry of Health (MOH), UPNT, BHVI, VOSH International and several other non-governmental organizations and interested parties. The program is designed to produce World Council of Optometry Competency Level 3 optometrists. This is an optometrist who investigates, examines and evaluates the eye and adnexa and associated systemic factors to detect, diagnose and manage disease, including the use of diagnostic drugs.[6] See **Table 1** for an explanation of the four WCO levels. Therapeutic drugs are taught in the program, but it is expected that the optometrist will not have prescription drug privileges when the law is formalized. There is hope that, when better established, the program could be expanded to award a five-year master's or eventually a Doctor of Optometry degree.

A possible near-term model for the Vietnamese program is the optometry program in Hong Kong. The Hong Kong system has had varying levels of certification, with the highest level allowing full diagnosis and dilation, though the drug formulary is minimal.[7] The lowest level is refraction-only optometrists.[8] Having a multilevel certification would allow for the uncertified refractionists in the country to continue to practice, and in time require certifications for all levels of those working with optical/eyecare patients. A similar law was initiated in Taiwan requiring all refractionists to be certified.[9] The authors' best hope is

that the Vietnamese will model the American system of optometry, with full diagnosis, treatment and even some minor surgical procedures such as foreign body removal allowed. This training has already been part of the Vietnamese course at UPNT. The optometric scope of practice in the United States and other parts of the world has been a slow progression over many years, and Vietnam may expect the same. Hong Kong started a board of optometry only as recently as 1984. Ideally, the profession of optometry in Vietnam will evolve into a broad practice to mirror the training that the new optometrists have received. Realistically, however, it will take some time for the general public and the authorities to understand and better appreciate the role of optometry in safeguarding the public health regarding eye care.

Although the first two cohorts from UPNT have begun their careers, Vietnam has not yet adopted a statute to govern the profession of optometry within the public health system. This issue, commonly referred to as the job code, is currently being discussed in the MOH in Hanoi. The job code is the law within the MOH that will govern the profession of optometry in Vietnam. A job code is required for every profession operating within Vietnam's health system. Each job code not only sets salary and remuneration guidance for hospital administrators, but also defines the scope of practice for each profession. Job codes cannot be introduced at any time, but rather only during a period of review. The review happens once every five years, and 2020 was a year of review, and an optometry job code was discussed. However, before being sent to the Prime Minister for signature, the job code must have input and review from several relevant ministries including the Ministry of Home Affairs, the Ministry of Labor and the Ministry of Finance, as well as several committees within the MOH. Until a decision is reached, hospital administrators or department heads have no official information to use in assigning tasks for the optometrists.

This study explores how the first two cohorts of graduates from the UPNT Optometry program have been utilized by the various hospitals to which they have been assigned, as well as their other modes of employment when reported. No review board nor ethics committee was known to be available. However, the World Medical Association's Declaration of Helsinki guidelines for medical research were followed. In addition, this research is eligible for exemption from regulations because it involved only a survey; the primary investigator recorded information in such a way that subjects cannot be readily identified; and any disclosure of identifiable information would not place the subjects at risk.

Methods

The survey was sent online to all 29 graduates from the first two UPNT classes. The response rate was 86% (25 anonymous responses were received). Data analysis was performed using Microsoft Excel (version 365).

Data was organized in simple spreadsheet form. The respondents were nine males (35%) and 17 females (65%). Age was not asked on the survey, but the age of most graduates is within one year of 22. No "non-traditional" students have been admitted to the program to date.

Results/Discussion

Question 1: In what type of work are you currently employed?

The distribution of the graduates' practice locations has been dictated in part by the local health department **(Figure 1)**. Each graduate was guaranteed an assigned job in a public hospital. Several have left these positions to pursue other practice opportunities. Seven graduates have been assigned to the optometry program at UPNT to serve as the future teaching core of the optometry department. One of these is abroad taking a master's in optometry course, and the rest are working as teaching assistants in both the UPNT Optometry department and in the school's AVC. The AVC is the primary teaching clinic

associated with the optometry program. Interestingly, the optometry students are the only student clinicians in the clinic. The medical students are not allowed to practice at the facility. The college clinic was not established as a teaching clinic for the medical students, but rather as a clinic to generate additional income for the university. The medical school's faculty are able to supplement their earnings by working at this clinic. As in the United States, medical educators are among the lowest paid segments of their professions. Several private eye hospitals and ophthalmological offices in the city have employed some graduates as well. Most of the graduates report working more than one job.



Figure 1. Click to enlarge

The demand for optometrists is expected to grow significantly once the practice parameters are defined by the anticipated job code. Increased demand will likely lead to higher salaries for the new optometrists. Currently, while the average wage in Vietnam is $150 (U.S. dollars, USD) per month, total salary for the optometrists surveyed averaged $425 USD per month for all work undertaken.[10] Although low by Western standards, the wages reflect the scales under which health care is delivered in Vietnam. A basic visit to a public eye hospital costs an uninsured patient approximately 100,000 Vietnamese Dong (VND) ($4.27 USD). Comprehensive exams are not offered, rather everything is problem-focused. If warranted by the initial visit, which includes visual acuity and slit lamp exam, by the ophthalmologist, a refraction may be ordered ($1-$2 USD additional fee). A fundus exam may also be ordered for a nominal additional fee. Examination fees at private ophthalmology offices can range from 200,000 to 500,000 VND ($8.54-$21.34 USD), and services included vary widely from office to office.

Question 2: What exam skill are you personally performing?

The data clearly show that the group of new Vietnamese optometrists are not routinely performing comprehensive examinations in their daily assigned tasks **(Figures 2-7)**. If one considers any average score value over three as what is usually performed as part of the exam, it can be seen that the young optometrists are typically used as refractionists. This would include history-taking, refractive services and some patient education regarding visual status. While disheartening to the graduates and faculty at UPNT who desire that comprehensive optometric exams would be routinely practiced, the level of practice is anticipated to improve when the MOH defines the job code for optometry. When optometrists are recognized as part of the healthcare system, it is expected they will be able to operate independently and perform comprehensive eye care within their given departments. As it is now, the optometrists are not allowed to independently examine patients without a licensed professional, usually an ophthalmologist, signing off on the patient.



Figure 2. Click to enlarge



Figure 3. Click to enlarge



Figure 4. Click to enlarge



Figure 5. Click to enlarge



Figure 6. Click to enlarge



Figure 7. Click to enlarge

Question 3: What are your attitudes and job satisfaction thus far?

Understandably, the young graduates are not fully satisfied with the scope of optometry currently allowed by their direct supervisors (ophthalmologists) **(Figure 8)**. Some ophthalmologists are unaware of what optometrists are trained to do other than refractive care, while others perhaps worry about optometry taking over some of their duties if allowed to become proficient. The young graduates recognize that they have unique training and skills but are not permitted to use their expertise in the current situation. In general, most believe they are underutilized and underpaid for the work they do.



Figure 8. Click to enlarge

The young optometrists also face some interesting cultural barriers to becoming independent practitioners in the Vietnamese public hospital/public health setting. The culture for young people in this environment is to not speak up or try to educate their superiors about new things. It is expected that the new worker will remain quiet and obediently perform the tasks they are assigned. Although the graduates possess unique knowledge and skill sets as fully trained optometrists, culturally they are not comfortable with advocating for their abilities to their department heads. Furthermore, as newly trained optometrists, they are not yet confident in those optometric skills. Optometric skills need to be practiced and honed daily. They are not able to do this, so it becomes a vicious cycle of improper utilization leading to lack of confidence. The description of knowledge, skills and abilities of an optometrist must come from the job code. Ministerial guidelines in the form of a job code should better inform the administrators and heads of departments and lead to proper utilization.

When compared with other countries that have established optometric professions in Southeast Asia, the newly trained optometrists in Vietnam will have several crucial tasks to perform as they fight for relevance within the established healthcare norms of their country. The primary task will be to educate the healthcare system of their capability. An equally crucial task will be to educate the public about the value of preventive eye care. While the job code will outline their practice limits, it will be necessary for the optometrists to be well-educated in eye care beyond their practice limits and to develop a system of continuing education within the profession. Finally, creating a Vietnamese optometric association to help organize these efforts would allow the young professionals to form a united voice.

Limitations of this study include the small sample size, the fact that there is no data at this point from the school of optometry in Hanoi regarding these questions, and the possible reticence of some graduates to answer the questions. Another limitation is that no previous studies of this type were found to contrast the findings presented here. One recent study of Nepalese optometrists focused on their attitudes toward the formation of a new optometry school, but not on the satisfaction of the graduates in performing the assigned duties of a new profession in their country.[11]

Conclusion

The first two cohorts of classically trained, WCO Level 3, Vietnamese optometrists have dispersed into a variety of practice settings. The graduates by and large are not fulfilling the role of providing independent comprehensive eye examinations. The graduates are currently being hindered in developing their talents and skills due to the lack of a national optometry law/practice definition and lack of understanding from hospital administrators and department heads about the services optometrists are trained to provide. They are further hampered by the culture of respect for their elders. This situation has made the daily working routines of the graduates less fulfilling for them. With the adoption of the anticipated job code for optometrists and better organization among the new Vietnamese optometrists, it is hoped that the current situation will change both in terms of the service optometrists will be providing to the public as well as their satisfaction in their new profession.

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