

RESEARCH ARTICLE

Issues and concerns on utilization of the pharmacy workforce in the Philippines

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Abstract

The increasing demand for pharmacists worldwide provides a basis for evaluating the status of the national pharmacy workforce for the purpose of developing strategies to address emerging issues and concerns. This study determined trends of national and international demand for Filipino pharmacists and identified issues affecting pharmacy workforce in the country. An extensive review of records obtained from various government agencies and a combination of qualitative methods were utilized. Descriptive statistics and content analysis were performed for quantitative and qualitative data, respectively. Approximately 70% of pharmacists were in the community practice and less than 1% in the academic. Academic institutions, community pharmacies, pharmaceutical establishments and hospitals included in the study were affected by fast turnover among their pharmacists and the difficulty of hiring replacements. A ten-year data on Filipino pharmacists working overseas showed the Middle East countries as among the major countries of destination while data on (permanent) migration disclosed Canada and United States of America as preferred countries of destination. Low remuneration rates, heavy workload, poor stature of the profession in the Philippines are some of the issues on demand that need to be addressed.

Introduction

Pharmacist shortage is a recognized phenomenon worldwide. The developed countries like the United States, Canada and Australia were reported to be experiencing pharmacist shortages as evidenced by increasing vacancy rates and difficulty in hiring pharmacists. It was also reported that low-income countries in Africa, e.g. Ghana, Kenya, Uganda and Zimbabwe, are experiencing similar concerns. As a result, it is projected that pharmacists would continue to be in demand. The growth in prescription volume, market demand issues, expansion of pharmacy and pharmacist's roles and the changing pharmacy workforce compounded by several other factors have been identified as contributing to the increasing demand for pharmacists (Gidman *et al*, 2007; Chan and Wuliji, 2006; HRSA, 2000). This prompted various countries to evaluate status of their pharmacy workforce to plan and develop strategies to address this issue. In the Philippines, there is no other published literature as yet that extensively describes the demand of pharmacists both nationally and internationally. This is a report on the results on utilization of Filipino pharmacists which also included trends of national and international demand. It also identified issues affecting pharmacy workforce in the country.

Materials and Methods

Data Sources and Selection of Participants: Data on overseas and migrant pharmacists and other related secondary data were obtained from the Bureau of Food and Drugs (BFAD), Department of Health (DOH), Commission on Filipinos Overseas (CFO) and the Philippine Overseas Employment Agency (POEA).

For the case studies, specific provinces were purposively sampled from the selected regions of the country namely Laguna (Region IVA- CALABARZON); Cebu (Region VII - Central Visayas); Ozamis City, Iligan City and Cagayan de Oro (Region X - Northern Mindanao); Davao City (Region XI - Davao) and Manila (National Capital Region - NCR) such that urban, rural and rural (combination of rural and urban) areas were represented. Schools/universities where the pharmacy course is offered and hospitals classified as public and private: primary, secondary and tertiary were then selected. Prior to the visit of these institutions, letters were sent seeking for permission to conduct interviews and focus group discussions and to request for participants in these activities. The institutions which consented were visited. A total of 51 institutions participated in the study (Table 1). All respondents were selected by their respective institutions.

For the survey, a list of the major registered pharmaceutical companies in Manila and their addresses were obtained from the internet. Survey forms were sent to each of these companies. A total of 8 out of the 44 companies selected consented.

Table 1 Areas of study and number of respondents

	NCR		Region		
	M*	L*	C*	OIC*	D*
Pharmacy/ drug store	2	1	1	1	0
School	4	1	1	1	1
Hospital	16	6	6	5	5

* M = Manila, L = Laguna, C = Cebu, OIC = Ozamis, Iligan, Cagayan de Oro, D = Davao

Instrument Development: There were two interview schedules developed for the FGD of the two groups, pharmacists in the hospital and faculty in the school of pharmacy. The interview schedule consisted of open ended questions asking information on salaries and benefits, length of employment, plans to leave present work, reasons for staying and leaving the current workplace. The key informant interview (KII) schedule for the heads of schools, community/drugstore pharmacist and hospitals contained similar questions. In addition, questions on vacancies, length of time to fill vacancies, coping mechanisms or measures to address unfilled vacancies were asked.

The questionnaire utilized in the survey of pharmaceutical companies consisted of closed ended questions that asked for similar items as that of the interview schedule for the FGDs and KIIs.

Data Collection Methods: Secondary data analysis was employed to determine the trends of national and international demand for Filipino pharmacists. An extensive review of records for the period 1997 to 2007 on the patterns of overseas and migrant pharmacists and other related secondary data was conducted. In order to understand the observed patterns and trends in utilization, case studies based on identified study areas were performed. Focus group discussions and/or key informant interviews, whichever is appropriate, were conducted in the areas identified. In order to get data from the pharmaceutical industry, a survey was conducted. Questionnaires were sent to different pharmaceutical companies in Manila. Finally, a round table discussion (RTD) composed of representatives from the different pharmacy organizations representing the academe, community practice,

industrial practice and government service; Commission on Higher Education (CHED) and Department of Budget and Management (DBM) was finally conducted where results of the study were presented and participants were asked to comment on the data and to build consensus. Out of the 14 organizations invited in the RTD, only nine attended, representing a total of eight organizations. Data collection commenced in October 2007 and finished on April of 2008. Additional data were collected on July 2009.

Data Analysis: The quantitative data were encoded in Microsoft[®] Excel, where descriptive statistics were subsequently performed. Qualitative data were initially transcribed verbatim using a template specific to the form used during the interview, coded and displayed in matrices using the Microsoft[®] Word. Content analysis was then performed. The RTD data were used to clarify and supplement reviewed records.

Results

Local Demand: In the previous study on pharmacy workforce by Lorenzo and Cruz (2001), it was found that a large percentage of about 77% practice in the community setting followed by 15% in the hospitals, 7% industry and 0.5% academe. Results of the interviews with the deans of the sampled schools strengthened this fact since most of their graduates (50 to 90%) practice in the community setting. An examination of the number of drug establishments registered with BFAD from 2002 to 2008 revealed that drug stores consistently outnumbered other drug establishments. Since the Generics Act requires the presence of at least 1 pharmacist per drug outlet during its hours of operation, this suggests that there are more job opportunities for pharmacists in the community in any region of the country. The BFAD data also

demonstrated that about 1,000 drugstores are added every year which implies that there are at least 1,000 pharmacists needed each year for drugstores alone.

Migration Patterns: Literature states that the Philippines is one of the sources of international pharmacy graduates (IPGs) in countries like Canada, Australia, US and the Middle East countries among others. POEA documented a total of 1,821 who left the country to work either as pharmacist or pharmacy assistants during the 10-year period, 1997-2007. Despite the steep decline observed in 2002, the trend for pharmacists working overseas was observed to be increasing (Figure 1). Saudi Arabia was the most preferred destination as demonstrated by 86% of the pharmacy assistants and 51% of the pharmacists (Table 2). Pharmaceutical Assistants in the Middle East are Filipino pharmacists registered with the PRC. The position of pharmacist is given only to those who took a Master degree after finishing the

undergraduate pharmacy degree program. This may be explained by the less stringent requirements to be completed during the period of application than when applying for a job in the United States or in Canada. Other destination countries are shown in Table 2.

While working overseas was common among pharmacists, data also showed that there were pharmacists who left for permanent emigration to other countries. A ten-year data from the CFO, an agency of the Philippine government tasked to promote and uphold the interests of Filipino emigrants and permanent residents abroad, and preserve and strengthen ties with Filipino communities overseas. One of its functions is to register and monitor emigrants leaving for various countries abroad, revealed a total number of 830 pharmacists who migrated (Figure 2). Although no distinct trend could be derived, it is clear that the Philippines is losing its pharmacists permanently to other countries especially the United States and Canada.

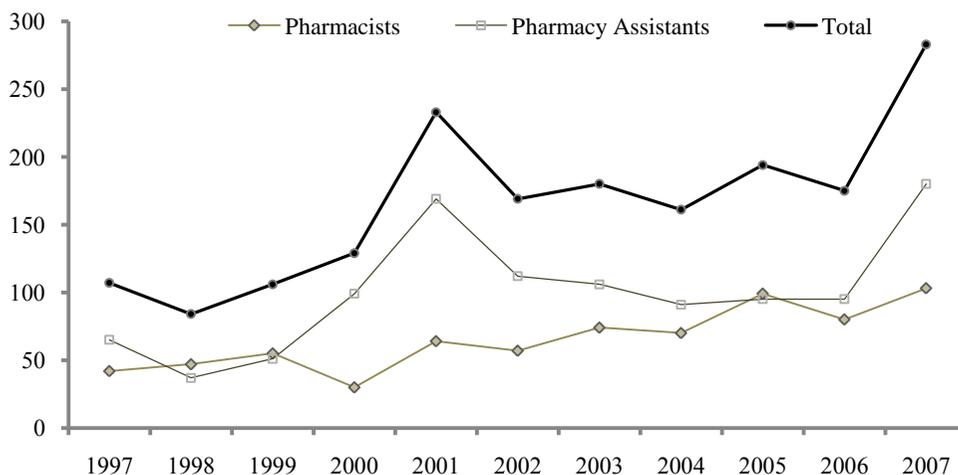


Figure 1 Ten-year employment of overseas Filipino workers

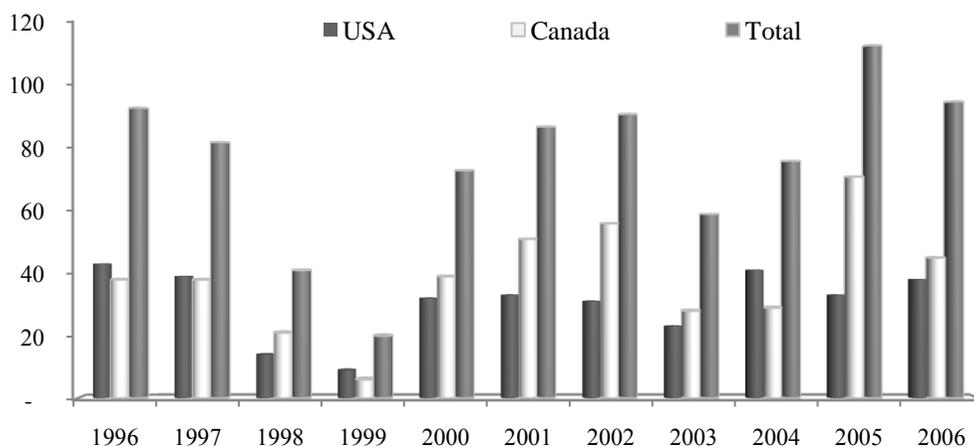


Figure 2 Ten-year migration of pharmacists

Table 2 Top-5 destination countries for migration and overseas employment

Destination countries for migration		Destination countries for overseas Filipino workers	
Country	%	Country	%
Canada	50.8	Pharmacy Assistants	
United States of America	40.5	Saudi Arabia	85.7
Australia	3.6	Qatar	4.4
New Zealand	2.2	Malaysia	3.3
Japan	0.5	Singapore	3.2
		UAE	1.3
		Pharmacists	
		Saudi Arabia	51.7
		Papua New Guinea	12.6
		USA	6.2
		Bahrain	5.9
		Trinidad & Tobago	4.9

Table 3 Summary of work conditions in different fields of specialization in pharmacy

	Academe	Hospital		Drugstore	Industry
		Government	Private		
Starting monthly salary (PhP)*	5,000 – 20,000	10,000	8,000	6,000 – 12,000	10,000 – 18,000
Monthly Salary (PhP)*	5,000 – 90,000 (most surveyed schools: 12,000 – 14,000)	10,000 – 20,000+		6,000 – 50,000 Chain 12,000- >100,000	10,000 – 100,000++
Benefits received	<u>Mandated benefits</u> 13 th month bonus, health insurance, social insurance, Pag-ibig housing <u>Paid leaves</u> sick, maternity, paternity, study academic, birthday sabbatical <u>Paid allowances</u> hazard, remote, subsistence, laundry, uniform, assignment <u>Variable incentives</u> Christmas bonus, longev+ivity pay, sponsorship in scientific conferences, field trips, incremental pay based on tuition fee increase, tuition fee discounts, profit sharing	<u>Mandated benefits</u> 13 th month bonus, health insurance, social insurance (GSIS), Pag-ibig housing <u>Paid leaves</u> sick, maternity, paternity, birthday, special leave privilege <u>Paid allowances:</u> hazard, meal, laundry, uniform, clothing <u>Variable incentives</u> sponsored scientific conferences, loyalty pay, medical internship sharing, financial assistance, Christmas bonus, sports (athletic) bonus, hospitalization, discounts for dependents, allowance,	<u>Mandated benefits:</u> 13 th month bonus, health insurance, social insurance (SSS), Pag-ibig housing (The following varies widely from hospital to hospital) <u>Paid leaves</u> vacation, sick, maternity, paternity <u>Other incentives:</u> Christmas bonus, subsistence allowance, hazard allowance, clothing allowance, meal allowance, longevity pay, sponsored scientific meetings, special leave, loan assistance, loyalty pay, study leave, extra bonus, hospitalization discounts, license fee	<u>Mandated incentives:</u> 13 th month bonus, health insurance, social insurance, Pag-ibig housing <u>Paid leaves</u> vacation leave, sick leave, paternity leave, maternity leave <u>Other incentives:</u> 13 th - to 15 th month bonuses, transportation allowance, travel incentives, free/ discounted purchase of products, salary loans, subsidized meals, free board and accommodation, car service, profit sharing	<u>Mandated benefits:</u> 13 th month bonus, health insurance, social insurance (GSIS), Pag-ibig housing <u>Paid leaves</u> vacation leave, sick leave, paternity leave, maternity leave <u>Other incentives:</u> 13 th - to 15 th month bonuses, transportation allowance, travel incentives, free/ discounted purchase of products, salary loans, subsidized meals, free board and accommodation, car service, profit sharing
Measures to address unfilled vacancies	Teaching load divided among available teachers, hiring part time teachers	Hiring contractual pharmacists, workload divided among available pharmacists, job order, cut down number of satellite pharmacies, train pharmacy assistants, overtime, encourage applicants to practice hospital pharmacy, hire part-time pharmacists, cut number of hours of operation of pharmacy			Workload divided among pharmacists, hire contractual pharmacists, accept graduates of related science courses, assign pharmacists in managerial positions
Usual reasons for staying	Lack of replacement, love for teaching, fulfillment in learning, light workload, seniority, camaraderie of faculty, family, financial constraints, contentment	Service, camaraderie, work environment, contentment, convenience, relationship with owner, stability		For independent pharmacies – pharmacists are the owners, close distance to family, convenience, satisfaction with work	Higher paying jobs, good work environment, attractive incentive packages

*1 U.S. dollar ~ 42 PhP

In the academe, the salaries varied depending on the location (provincial vs. NCR) and the type of institution (government or private). The starting salary was as low as PhP5,000 (\$117.96) for instructors in the province. Private institutions in the NCR offered as high as PhP90,000 (\$2,123.24) monthly for its highly qualified professors (PhD graduates) and offered more benefits when compared with government institutions. The average length of employment was from six months to more than fifteen years. It was also commented that there is a fast turnover rate among its young (junior) faculty members. The senior faculty members have longer stay and while some argued of a sufficient number of teachers at present, there is also an existing concern for the need of younger faculty to be trained to replace those who will be due for retirement. Difficulties in filling vacancies were expressed (Table 3). Other than problems regarding teachers, the revision of the pharmacy curriculum was also identified as another concern (especially in Region X) because of the lack of capability of teachers to teach the new courses. During the RTD, a representative of the Philippine Association of Colleges of Pharmacy (PACOP) stated that this should now be a minor concern because of the faculty development seminars organized by the organization to address teaching of new courses.

In the hospital practice, differences in salaries and benefits between private and government hospitals and across geographic locations were likewise observed. These differences were also observed in terms of the level of classification of the hospital. The starting salary in the government hospitals was observed to be consistently higher.

The benefits however in government hospitals varied geographically. Some hospitals that are managed by the Local Government Units (LGUs) reported not receiving all the benefits, especially those mandated by the Magna Carta for Public Health Workers. From the FGD, the reason cited was because of the lack or absence of savings of the LGUs to provide such benefits. The average length of employment was from one to more than thirty years. Despite the fact that some+ pharmacists stayed longer in the hospitals, several hospitals experienced the difficulty of hiring pharmacists. In fact, in Region X, where scarcity of pharmacists exists, the dean of one college of pharmacy has to serve also as the pharmacist for the hospital of the school.

In community pharmacy practice, the salaries and benefits varied depending on the type (chain or independent) and the geographical location of the drugstore. Entry salary ranged from PhP6,000 (\$141) to 12,000 (\$283). The Drugstore Association of the Philippines (DSAP) through its president, during the RTD, stated that salaries in the provinces are higher than in the NCR. DSAP further noted that a number of pharmacists in the independent drugstores are usually pharmacy owners and as such, do not have any problems regarding hiring or retaining pharmacists. Chain drugstores, whether small or big, on the other hand shared concern on the difficulty of hiring and retaining their pharmacists. Interview with the pharmacists and participants of the RTD employed in the drugstore exposed the fact that the number of applicants for available pharmacy positions is inadequate to fill total available positions, which is further complicated by the fact that some of the newly-hired pharmacists stay

only for a short period. Because of the difficulty in filling their vacancies, pharmacy owners would hire even those who have plans of working overseas. With the fast turnover of pharmacists, training and development has become difficult and more expensive. Participants in the RTD also suggested that the drugstores are not simply losing its pharmacists to work overseas but to the more enticing business process outsource centers which offer higher salaries and better benefits.

In the pharmaceutical industry, the pharmacist has a variety of career options: regulatory affairs, research and development of products, clinical research, marketing, quality assurance/ control, purchasing, supply chain management, manufacturing and dispensing warehouse. The starting salary which ranged from PhP8,000 (\$188 for a QC analyst) to as much as 18,000 (\$424 for a clinical research associate) a month, varied with the position and the company. The industry has better opportunities for growth, both financially and professionally. However, results of the survey, while having a very low response rate of 18% (8 of 44), showed that some (5 of 8) pharmaceutical companies experienced difficulties in filling up pharmacist positions as well. In fact, one company related that before, when an ad for a job vacancy is posted, they would receive ten or more applications for the position as compared to the present when they receive only one or two applications. Another reason mentioned was unqualified applicants. Some viewed that the pharmacists with appropriate experience work overseas and those who stay are the new graduates with less or no experience at all. One respondent from a drug company added that

sometimes their applicants would withdraw their application for non-pharmacy related work where compensation is higher. During the RTD, the current situation of the workforce in the industry was affirmed by representatives from the sector.

Discussion

The trends of utilization of pharmacists in the country were described based on the secondary data obtained from the different government agencies and inputs of participants from the different qualitative methods of data collection. There exist concerns on retention and attrition and an emerging concern on shortage of pharmacists in the academe, hospital, community and the industry in the country. The signs of shortage presented in this study are similar to those in the developed countries like difficulty in filling up vacancies and higher vacancy rates (Chan and Wuliji, 2006; HRSA, 2000; Poston, 2005). The difficulties in filling up vacancies result because of lack or inadequate applicants; unqualified applicants or the long waiting time in application at government institutions. The implications of the difficulties presented were likewise similar to those of developed countries. Restricted services in some pharmacies (i.e. shorter duration of operation, delays in opening new stores, failure to provide patient counselling and other related activities due to excessive workload of pharmacists), job stress, inadequate work conditions and reduced professional satisfaction due to longer working hours, were cited, among others (Chan and Wuliji, 2006; HRSA, 2000). The lack of pharmacists opting to enter the academe is especially critical because it does not only restrict expansion of class size but may also

affect quality of education in the long run.

There is an increasing demand for pharmacists both at the domestic and international job markets. There are local job vacancies posted in all areas of pharmacy. Unfilled job positions are further complicated by the fast turnover of pharmacists in all areas. The major push-pull factor identified was economic in nature. Pharmacists are leaving the country to work either as pharmacists or pharmacy assistants in various countries. Moreover, an increasing number of pharmacists are opting to work as business process outsource center agents which have better remuneration packages locally. In a study of migration of health workers (which does not include pharmacists) from the Philippines, a factor identified was likewise related to economics along with working conditions and socio-political factors (Institute of Health Policy and Development Studies, 2006). International literature on migration of health professionals postulated similar reasons for migration which included better remuneration in the destination country, joining or supporting family, political and social instability, poor living conditions, poor working conditions and management, unsafe environment, further training and qualifications, job opportunities and satisfaction (Wuliji *et al*, 2009; Labonte *et al*, 2006; Astor *et al*, 2005).

The existing concerns on retention of pharmacists in the country require the improvement of compensation packages for pharmacists, whether by government or private employers. The pull factors should be strengthened to balance the push factors of leaving the country since institutions with good salary and benefit incentives are more likely to hold their employees for longer years. Professional organizations need to promote the positive image of the pharmacy profession in the country in order to improve the profession's current stature. Introducing to the society the role of the pharmacists as drug experts will more likely increase the morale of pharmacists in the workforce.

Furthermore, with the burgeoning issue on pharmacist shortage both at the local and international levels, the pharmacy technician or assistant must be formally instituted in the country in order to free the pharmacist on some of its traditional roles and allow them to take on more patient-oriented roles such as patient counselling which can also help the people to appreciate and accept them as true professionals. Other countries have well-established guidelines on pharmacy technicians or assistants regarding their education, licensure etc. (Blackburn, 2006). The Philippines on the other hand does not have an existing national policy that defines their role in the health care delivery system. While there are personnel who are labelled as "pharmacy assistants", there is no standard education or training for them. Some of these "pharmacy assistants" even assume dispensing function which further complicates and contributes to the confusion among patients regarding the role of the pharmacist.

There is no local standard pharmacist population ratio or standard FTEs (full time equivalents) for pharmacists unlike physicians and nurses. Having FTEs would help in the identification of future pharmacy workforce needs. While international standard is also lacking at present, other countries have existing systems to accurately estimate their pharmacy workforce needs. The Philippines needs to establish such standards or system in the country for assessing and accurately projecting the number of pharmacists needed by the country. An accurate data monitoring for pharmacists must be put into place by the government or pharmacy organizations to determine the actual number of pharmacists working in specific fields. The data

generated may also be used as guide in the formulation of law, regulations and other issuances that govern the education and practice of these professionals. This will also ensure adequate supply of practitioners for local health needs while addressing the demand outside of the country.

Conclusion

The observed utilization trends of pharmacy workforce in the Philippines presented significant issues and concerns that need to be addressed in order to maintain an adequate number of pharmacists in the country. These include low remuneration rates, heavy workload and poor stature of the profession among others. The importance of pharmacists in any country's health care system lies in their capability to address drug quality concerns, rational use of medications, patient compliance and other medication management issues. Sufficient number of pharmacists is therefore critical to high quality health care and medication use, in addition to doctors and other health professionals. Concerted efforts among the major stakeholders must be directed to planning and managing the supply of the pharmacy workforce in the country to meet the profession's growing demand in both the domestic and international markets.

The study presented several limitations. The data primarily employed secondary data and therefore relied on its accuracy. The participants selected for the focus group discussions were selected by the head of the institution which may have introduced bias. The small number of respondents employed likewise limits the external validity of the results. Nevertheless, despite its limitations, the study presented valuable issues that need to be

considered in planning and managing pharmacy workforce in the country.

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