

Awareness of Filipino Community Pharmacists on Immunization Delivery: A Key for Prepared Quality Service

Ivy T. Echano^{1,2}, *Benjel A. Andaya¹, Denlo Jay Asuncion¹,
Marites M. delaCruz¹, Jennifer M. Tobongbanua¹, Cecilia D. Santiago^{1,2}
and Gerard Q. De Guzman^{1,2}

¹School of Pharmacy and ²Graduate School, Centro Escolar University, Manila, Philippines

Abstract: As provided for by Republic Act No. 10918, there is an impending need to train community pharmacists in the provision of direct immunization services in the community, in addition to their perceived roles in dispensing and patient counselling. This study seeks to identify problem areas that limit or impede the roles of community pharmacists in the actual administration of routine adult vaccines. A validated semi-structured questionnaire based on the Likert scale was designed to assess respondent pharmacists in the areas of dispensing, information systems, vaccine administration and perception on the general concepts of immunization. The respondents highly agreed that they have sufficient information concerning delivery of immunization services in the community and are highly receptive to the provisions of appropriate trainings in vaccine administration. However, there are further needs for trainings on safe and effective parenteral vaccine administration and delivery as well as good dispensing practices for biological products. This study shows that there is a strong need for community pharmacists to be aware and participate in training programs focusing on direct vaccine administration and adverse reaction counselling.

Keywords: Filipino community pharmacists, immunization, vaccination, RA 10918

I. Introduction

It has long been established that pharmacists are the most trusted and accessible health care providers in the reviews of medication therapy. The “immunization neighborhood” concept has been spearheaded by pharmacists and is defined as “collaboration, coordination, and communication among immunization stakeholders, with the goal of meeting the immunization needs of patients and protecting the community from vaccine-preventable diseases” [1,2]. As of 2012 in the United States, over 20,000 pharmacists who were trained to administer immunizations and approximately 20% of adults received immunizations in a pharmacy. Thus, pharmacists are greatly in a unique position to render immunization services to at-risk patients based on medication usage, understand storage conditions for vaccines and support completion of multi-dose vaccines.

The new Philippine Pharmacy Law (R.A. 10918) has provided for empowerment of community pharmacists by providing immunization services for routine vaccination among adults. The Philippine FDA, in collaboration with the Philippine Pharmacists Association, seeks to provide sufficient training for pharmacists in the safe and effective administration of biological preparations [3]. The current study was undertaken to provide a baseline assessment of the nature and extent of Filipino pharmacists’ involvement in providing immunization services, particularly in areas of dispensing, administration, adverse events that may arise after administration and perception and knowledge on the concepts of vaccination.

II. Methods

This is a prospective cross-sectional study that utilized convenience or chance sampling. Semi-structured questionnaires were sent by random to community pharmacists across the National Capital Region (NCR) and Calabarzon. This survey instrument was validated, pre-tested and approved by the institutional ethics committee of the Centro Escolar University (Manila) to ensure that fundamental human rights of respondents are upheld. The survey was conducted between April and May of 2015 while tallying and evaluation of data was performed on June of 2015. The questionnaire was divided into 4 major sections, namely: (a) dispensing practices related to vaccines; (b) pharmacists' awareness on vaccine information; (c) pharmacists' perception towards delivery of immunization services; and (d) self-rating knowledge among pharmacists on vaccination. The five-point Likert scale was used in assessing each parameter. The 2-tailed student t-test, 2-way analysis of variance and Chi-square correlational statistics was used to evaluate and review the implications of gathered data.

III. Results And Discussion

The following demographic data were obtained from the respondents: age, sex, years in practice, education and practice-related information such as job title and location of practice. From the 125 survey forms disseminated, 104 (83.2%) respondents confirmed by returning the accomplished questionnaires within 3 days. There were 93 females and 11 males who responded, showing that female pharmacists still dominate the profession.

The frequency and range of ages of the respondents were as follows: 41 (21-25); 23 (26-30); 19 (31-35); 10 (36-40); 6 (41-45); 4 (46-50) and 1 (51-55). This may translate to gathering information from respondents among the youths, covering well the age group who just recently passed the licensure examination as well as young pharmacists below the age of 30 who may have had garnered considerable experiences in retail pharmacy practice. Majority of the respondents are BS Pharmacy graduates whereas only 3 are Doctor of Pharmacy degree holders. Seventy-eight of the respondents classified their location of practice as urbanized, while 26 perceived their vicinity as rural. Table 1 shows the computed mean scores to describe dispensing practices related to vaccines among community pharmacists.

Table 1: Dispensing practices related to vaccination

Parameters Measured	Mean	SD	Verbal Interpretation
1. Dispensing of vaccines	2.75	1.91	Rarely
2. Receiving vaccine shots as prophylaxis	2.55	1.34	Sometimes
3. Counsel patients on vaccines & their possible adverse effects	2.92	1.15	Never
4. Receive inquiries related to vaccines	3.06	1.10	Sometimes
5. Experiences in parenteral vaccine administration	1.20	2.05	Never
Weighted Mean	2.5	0.75	

It was found out that dispensing vaccines from the store is not always practiced by most of community pharmacists because most drugstores do not generally purchase biological products. Administering and counselling about vaccines are not always practice by pharmacist. However, as vaccine advocates, pharmacists were also found to adopt any of the following measures: as educators, facilitators and immunizers. About 79.81% of the respondents are involved as educators, by motivating people to be immunized through counselling and promotion, while 4.81% are involved as facilitators by providing the facilities for physicians and nurses for vaccination. Only 1.92% are involved as immunizers by directly involved in administering vaccines. Alarmingly, It was also found out that 13.46% never involved themselves as vaccine advocates for the sole reason that they never purchased biological products from cold-chain distributors.

By contrast to dispensing issues on vaccination which obtained a relatively low weighted mean of 2.5, Table 2 shows the strong agreement among community pharmacists ($p > 0.01$) on the benefits that may be derived from vaccine exposure. These perceptions may have evolved from their general knowledge of immunization concepts taught in Pharmacy schools and continuing professional education particularly in the age groups 21 – 25 ($p < 0.05$) and 26 – 30 ($p < 0.05$) as compared to their older counterparts.

Table 2: Awareness of pharmacist on vaccine information

Parameters Measured	Mean	SD	Verbal Interpretation
1. Benefits of vaccines in disease prevention	4.53	0.54	Strongly agree
2. Perception that vaccines have fewer adverse reactions than any other medicines.	3.80	0.74	Agree
3. Vaccines stimulate the immune system	4.33	0.51	Agree
4. Vaccines underwent sufficient clinical trials	4.10	0.58	Agree
5. Vaccines do not interact with conventional medicines	3.99	0.70	Agree
Weighted Mean	4.15	0.29	

As reflected in Table 3, community pharmacists from all age groups strongly agreed in believing they can substantially contribute to the improvement of public health, particularly in the prevention of serious community-acquired contagious infections, when given the right training to personally administer vaccines and counsel patients on the benefits, implications and consequences of vaccination right after dispensing ($p < 0.01$).

Table 3: Perceptions of pharmacist towards immunization delivery

Parameters Measured	Mean	SD	Verbal Interpretation
1. Pharmacists are capable of administering vaccines safely and effectively with the proper training	4.20	0.82	Agree
2. Pharmacists allowed to administer vaccines will improve job satisfaction	4.02	0.86	Agree
3. Pharmacists allowed to administer vaccine will improve the rates of people vaccinated	4.16	0.86	Agree
4. Pharmacists allowed to administer vaccine will improve public health conditions	4.32	0.66	Agree
5. FDA/PPhA immunization training program will help pharmacists to become efficient immunizers in the community	4.38	0.59	Agree
Weighted Mean	4.22	0.14	

As shown in Table 4, community pharmacists rated their knowledge about vaccines as relatively good (weighted mean = 3.15), which is an indication that they can even provide efficient vaccination services when given the proper training by the right agencies.

Table 4: Self-rated Knowledge about Vaccines

Parameters Measured	Mean	SD	Verbal Interpretation
1. Current CDC guidelines for adult immunization	2.88	0.71	Good
2. Proper vaccine handling and storage	3.33	0.97	Very good
3. Appropriate route of vaccine administration	3.23	0.94	Good
4. Vaccine-preventable diseases	3.32	1.01	Good
5. Biohazard waste disposal and blood-borne pathogen regulation	3.00	1.11	Good
Weighted Mean	3.15	0.20	

These collective responses were elicited by the more experienced pharmacists in the age groups of 31 and above ($p < 0.05$) as compared to their younger counterparts. This is because older pharmacists are more aware of standard operating procedures on the distribution, merchandising and storage of biological products, particularly on pharmacovigilance issues such as the spontaneous reporting of adverse reactions arising from vaccine administration (such as anaphylaxis, febrile reactions, hypersensitivities) and cold chain management issues, such as the provisions for biological refrigerators and the maintenance of the required storage temperature before and during transport of vaccine products [4].

The respondents were also asked for some possible problems encountered in providing immunization services by the pharmacist. The following were the elicited responses obtained from them: (a) the lack of awareness among patients on the vital role of community pharmacists in providing immunization, (b) patients' perceived hesitation on pharmacists being given a central role as immunizers, (c) lack of satisfaction, confidence and trust on the part of the patients, (d) lack of training or seminars on vaccine administration for pharmacists, (e) lack of experience among community pharmacists in providing direct immunization services, (f) job security issues such as the fear to administer vaccines as these are not stated in pharmacists' job descriptions, (g) shortages in the number of pharmacists available as immunizers, (h) number and workloads of community pharmacists, (i) availability of vaccines, (j) storage issues for biological products, such as the need to invest on biological refrigerators.

IV. Conclusions

Based on the results of assessing the knowledge, skills and attitudes of community pharmacists towards immunization delivery, it was found out that most of the respondents are actively involved as vaccine advocates but not as immunizers, although majority of them have signified their willingness to be trained in vaccine administration. It is hoped that the results generated from this study will provide benchmarks for improving proposed future training programs for vaccination among pharmacists as embodied in RA 10918.

References

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