Pharmacy-Based Immunization Service

An Opportunity For Pharmacists In Ghana To Expand The Frontiers Of Pharmacy Practice

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The 78th FIP Congress successfully took place on September 2–6, 2018 in the beautiful historic city of Glasgow, Scotland. The theme was *Pharmacy: Transforming Outcomes!* As usual, Ghana was adequately represented by Pharmacists in all areas of practice including academia, hospital, community, regulatory, administration, and manufacturing.

Four main topics were discussed: From bench to bedside – Advancing pharmaceutical care; Partners in health – Pharmacists and pharmaceutical scientists cannot operate in a vacuum; Empowered for health – Training and leadership development; and Targeting special interests – Target special interests in the different fields of pharmacy and the pharmaceutical sciences.

Among the many interesting sessions was one that featured an inter-disciplinary panel (pharmacist, physician, and nurse) that looked at *Creating a Successful Pharmacy-based Immunization Service*. A presentation from the perspective of the pharmacist was made by Mitchel C. Rothholz of the American Pharmacists Association.

It was submitted that the Pharmacist is an accessible, valued, and recognized member of the immunization neighborhood who is authorized and compensated for providing immunization services related to those recommended by the Advisory Committee on Immunization Practices.

One area that presents Pharmacists with good opportunities in the field of immunization is the aging population. Globally, the percentage of the population that is over 60 years keeps increasing, which could be as a result of improved healthcare delivery, among others. The opportunity here for Pharmacists is that this age group has vaccine-preventable diseases.

Mitchel presented figures that indicate that it costs the US about $26.5 billion annually to treat four major vaccine-preventable diseases (flu, pneumococcal, shingles, pertussis) among adults (≥ 50 years) in the country. For example, there were 2,791 acute cases of hepatitis B in 2014. Furthermore, in 2015, 29,500 cases of invasive pneumococcal disease and 3,350 related deaths, as well as 20,762 cases of pertussis were recorded. In addition, 3,000–49,000 deaths related to influenza and about 1 million cases of zoster infection are reported annually.

The WHO immunization coverage tells a story that should urge Pharmacists to get involved in immunization: global vaccination coverage has stalled at 86% with no significant changes during the past year; uptake of new and underused vaccines is increasing; immunization currently averts an estimated 2 to 3 million deaths every year (and additional 1.5 million deaths could be avoided,

however, if global vaccination coverage improves); an estimated 19.5 million infants worldwide are still missing out on basic vaccines (around 60% of these children live in 10 countries: Angola, Brazil, the Democratic Republic of Congo, Ethiopia, India, Indonesia, Iraq, Nigeria, Pakistan and South Africa); and finally, less attention has been paid to adult immunization.

Meanwhile, in terms of pneumococcal vaccination, WHO estimates a global coverage of 37%, with Germany reporting 51% coverage of adults over 60 years.

These low figures have been recorded against a latent danger of global shortage of healthcare professionals. According to a WHO 2013 report, there would be a worldwide shortage of 12.9 million healthcare workers by 2035.

The Speaker also enumerated some of the roles pharmacists play when it comes to immunization advocacy. As an advocate, the pharmacist would be educating and motivating patients; as a facilitator, the pharmacist would be hosting others who vaccinate; and as an immunizer, the pharmacist would be administering the vaccinations.

The following is the 2016 FIP global report on current pharmacy impact on immunization

WHO region	All WHO Member States	In this report (n)	Advocacy for vaccination	Vaccination in pharmacies	Vaccination by pharmacists	Training required	Access to vaccination records
Africa	23.7% (46)	11.1% (5)	11.1% (5)	4.4% (2)	2.2% (1)	8.9% (4)	4.4% (2)
Eastern Mediterranean	11.3% (22)	11.1% (5)	6.7% (3)	4.4% (2)	0% (0)	0% (0)	2.2% (1)
Europe	27.3% (53)	42.2% (19)	28.9% (13)	17.8% (8)	11.1% (5)	13.3% (6)	20.0% (9)
South East Asia	18.0 (35)	2.2% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
The Americas	5.7% (11)	20.0% (9)	13.3% (6)	11.1% (5)	8.9% (4)	8.9% (4)	8.9% (4)
Western Pacific	13.9% (27)	13.3% (6)	11.1% (5)	6.7% (3)	6.7% (3)	6.7% (3)	2.2% (1)

In the 2017 Annual Report of the Pharmaceutical Group of the European Union (PGEU), a report on measuring health outcomes in community pharmacies was presented. Under the medicines administration services component of the report, in 40% of the countries, vaccination for the seasonal influenza virus is available in a community pharmacy. Additionally, in 23% of countries, the flu vaccine is administered by pharmacists, whereas in the remaining countries it is administered by other healthcare professionals in the pharmacy. Meanwhile, vaccines other than those against influenza (e.g., travel vaccines, human papilloma virus, etc.) are administered by pharmacists in 17% of countries, and by other healthcare professionals in the pharmacy in 20% of countries.

The term "immunization neighborhood," coined by the American Pharmacists Association in 2012, is gaining acceptance by immunization stakeholders and is defined as "collaboration, coordination, and communication among immunization stakeholders dedicated to meeting the immunization needs of the patient and protecting the community from vaccine-preventable diseases." It is patient and community centric, where an entire community can invest in administering vaccines, assessing and/or referring patients to receive appropriate vaccines, support sharing, and exchange of immunization data.

Some arguments used against pharmacists obtaining authority to be involved in immunization were also presented:

- Disrupt the "medical home'"
- Pharmacists don't have the time
- Pharmacists aren't trained
- Pharmacists aren't able to handle anaphylactic reactions
- Would lose documentation of the vaccine being given
- Would increase physician liability
- Patients may get immunized twice with the same vaccine
- Will create a vaccine shortage
- Just doing it for profit

Based on appropriate engagements, all of the above can be adequately addressed and would thus pose no impediments to the pharmacist's involvement.

Pharmacists can also obtain recognition using the following procedure:

1. Identify unmet public health needs that they can impact
2. Determine the challenges that providers who are currently administering immunizations are facing today and how pharmacists can assist them
3. Develop a vision for what is being sought
4. Find champions

He presented some of the unique contributions pharmacists can make to immunization to improve medication use and advance patient care as follows:

- Access, proximity, and extended hours of operation

- Ability to identify high-risk patients easily based upon their medications
- The public's trust
- Message dissemination opportunities
- Support completion of multi-dose vaccines (e.g., HPV, etc.)
- Knowledgeable vaccine resource (education/training)
- Ability to handle storage issues

There is a vast opportunity for pharmacists in Ghana to be more involved in immunization and use this as a great platform to dive into other areas of patient care. As explained by Mitchel, these include, but are not limited to, the following patient care services: medication and disease management (e.g., management of diabetes and cardiovascular disease), medication administration services, and antibiotic/infectious disease stewardship, etc.

The Pharmaceutical Society of Ghana, and specifically the Community Pharmacy Practice Association (CPPA) can take up the challenge. There would be the need to develop a concept paper with a clearly defined road map that would ensure the paharmaists full participation in immunization in Ghana. It must be established whether or not there are laws, regulations and rules that would require amendment to allow pharmacists engage in immunization. Engagement with relevant bodies, including the Expanded Programme on Immunization EPI) and other Agencies within the MoH, should then be organised.

Once this is cleared, it is suggested that a well-planned pilot is executed. Selected districts in all the 16 Regions can be the starting point. A criteria must be outlined for the selection of participating pharmacies. Training of the pharmacists in the handling and administration of the vaccines , as well as handling of anaphylactic reactions must be carried out.

There should be an effective monitoring and evaluation of the programme: contribution to availability and access to vaccines; effect on coverage in the participating districts; cost of immunization, etc.

Meanwhile, it is worthy of note that there is a medium term planning tool for the National Immunisation Programme in Ghana. The comprehensive multi-year plan (cMYP), which is the third in the series, has an implementation period, 2015 – 2019 and it is titled, *A Plan to Reach Every District to Reach Every Child*. This is the final year of its implementation and pharmacists must begin to see themselves as part of these plans and hence should a 4th plan be developed, pharmacists must be in there.

It behooves all pharmacists to consciously realize that every patient encounter provides an opportunity to educate and advance the immunization agenda for the country.

References

WHO immunization covereage [WHO 2017 Fact Sheet: http://www.who.int/mediacentre/factsheets/fs378/en/]

PGEU Annual Report - 2017: Measuring health outcomes in community pharmacy

International Pharmaceutical Federation (FIP). An overview of current pharmacy impact on immunisationA global report 2016. The Hague: International Pharmaceutical Federation; 2016.

Comprehensive multi-year plan (cMYP), 2015 – 2019

CDC. Viral Hepatitis Surveillance United States. www.cdc.gov/hepatitis/statistics/2014surveillance/pdfs/2014hepsurveillancerpt.pdf

CDC. Prevention of Herpes Zoster. MMWR 2008. 57(RR-5): 1-30.
CDC. Estimates of deaths associated with seasonal influenza –United States, 1976-2007. MMWR. 2010;59(33):1057-1062.
CDC. 2015. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Streptococcus pneumoniae, 2015.

CDC. 2015 Final PertussisSurveillance Report. http://www.cdc.gov/pertussis/downloads/pertuss-surv-report-2015.pdf.