

Enhancing the role of pharmacists in public health in developing countries

With Africa Liberation Day approaching (25 May), **Lloyd Matowe** and colleagues look at how the role of pharmacists in developing countries could be enhanced

THE definition of public health has evolved over the years. An early definition by Winslow¹ described it as the science and art of preventing disease, prolonging life and promoting physical and mental health and well-being through the organised efforts of the community. Winslow went on to elucidate that these community efforts needed to encompass sanitation for the environment, the control of community infections, education of individuals in principles of personal hygiene and the organisation of medical and nursing services for prevention and early diagnosis of diseases.

The Institute of Medicine² defines public health as what society collectively does to assure the conditions for people to be healthy. What is common with these two definitions is that public health is about actions aiming to preserve, protect and sustain population health through various preventive, diagnostic and curative intervention strategies. The focus of public health is the well-being of the population in contrast to that of the individual, even though population health is the aggregate of individual health.

Since public health is linked to societal values, behaviours and systems, the field is dynamic and tends to change according to these three parameters. In developing countries, particularly in Africa, the provision of health services leans heavily towards today's epidemics, including HIV and AIDS, malaria, tuberculosis and other infectious diseases. This calls for different approaches to the implementation of interventions from a public health perspective. These approaches should include sector-wide targeting of different interventional points, which include the participation of different "specialists". This increases effectiveness and efficiency and maximises the use of the minimal resources at the community's disposal.

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For pharmacists, a collaborative approach to combat today's public health challenges should be viewed as an opportunity for the profession to assume previously inaccessible service roles and, in the process, reinforce their professional image.

As the custodians of medicines — a component that draws up to 60 per cent of healthcare budgets in some developing countries during an era when vast resources are made available by the international community for pharmaceuticals — never before has there been a better opportunity for pharmacists in developing countries to assume leadership positions to manage resources effectively.

This can be done through meticulous selection of value-for-money and effective products, efficient procurement, and timely distribution of these medicines to the communities in need.

Pharmacy and public health

In Greek and Roman mythology, Hygieia (source of the word "hygiene") was a daughter of the father of medicine. She was the goddess of health, cleanliness, sanitation and social welfare, and was associated with prevention of sickness and the continuation of good health.³ In today's world we would say she was a public health specialist contrary to her father, Asclepius, who directly deals with healing. Her ordinary presentation is with a serpent, which she is feeding from a large bowl. The bowl is universally recognised as the symbol for the pharmacy profession.

Therefore, symbolically, public health and pharmacy seems to have been linked from the ancient world.

When public health was at its infancy stage, when it was confined to sanitation and good housing with special attention on the use of clean water, there was little for pharmacists to get involved in. However, with the changing scope of public health to include addressing current challenges and the provision of quality services, pharmacists should seize the opportunity and take their place at the table. The onus is on them to demonstrate to professional peers and policy makers that their special skills in medicines management are unique attributes of the profession that makes them an integral part of the healthcare system.

Pharmacy in developing countries

With much smaller numbers relative to their counterparts in developed countries, pharmacists in developing countries tend to keep to the confines of dispensing roles mainly in community pharmacies. We challenge these pharmacists to move away from the dispensing window and to demonstrate the value of the years invested in pharmacy schools to improve the well-being of communities. In post-conflict countries like Liberia, for example, the profession is barely visible, yet it is in these countries where medicines regulatory systems are weak and practice is substandard. For example, prescription medicines are freely sold on the streets of Monrovia, while an analysis of antimalarial medicines sampled from the

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market of several African countries found a considerable proportion contained no active ingredient.⁴

In Tanzania, most of the population purchase pharmaceutical products from a network of small drug shops. Most of these have recently been upgraded to a new class of drug shops termed accredited drug dispensing outlets (ADDOs).⁵ The programme of accreditation and quality improvement to create ADDOs has been shown to improve access to medicines, the quality of medicines, and the quality of pharmaceutical services provided to the community. Yet, pharmacists and the pharmaceutical fraternity have been slow to capitalise on this success and harness the programme as pharmacist-owned and, as such, bring it under the banner of the profession. It is identification of such opportunities that will ensure the viability of the pharmacy profession in developing countries and thus define the pathways to long-term sustainability.

Other reasons why pharmacy must be proactive in assuming service- and systems-based roles include the fact that physicians in developing countries, particularly in Africa, are often overloaded with clinical duties, which presents major challenges for physicians to continue to assume major roles in management and systems strengthening. By demonstrating that they can competently assume these roles and complement physicians in providing quality healthcare services, pharmacists have ready-made opportunities to enhance their role in the community.

Patient level

At the patient level, the public health role of pharmacists should emphasise the patient-centred tenets of pharmaceutical care. By spearheading initiatives such as formulary development, medicines safety and pharmacovigilance, guidelines for medication counselling, and provision of drug information services to health professionals and the general public, pharmacists would be much appreciated as a key boulder in the health systems architecture. In developed countries, these functions are already embedded into the role of pharmacists but, in most developing countries, they remain far divorced from the realities of practice.

Public health programmes

In addition to the argument above, in the west, community pharmacies routinely engage in public health programmes such as needle exchange, disease screening (eg, blood pressure and body mass index checks), pregnancy testing and counselling, immunisation, counselling for at-risk populations, and smoking cessation programmes. In developing countries, we see no reason why community pharmacies should not be involved in similar public health services that are pertinent to their communities, such as rapid diagnostic testing for malaria or routine advice for family planning services.

Critical health service

Developmental partners have increased funding for critical health services. Organisations such as the Global Alliance for Vaccines and Immunization (GAVI), the Global Fund to Fight AIDS, Tuberculosis and Malaria, the President's Emergence Plan for AIDS Relief (PEPFAR), the President's Malaria Initiative and UNITAID, to mention but a few, are all engaged in or support procurement of pharmaceuticals and other health products for use by millions of patients in developing countries. For instance, GAVI, by the end of 2010, had disbursed approximately \$2.1bn for new and underused vaccines alone.⁶ In 2010, UNITAID budgeted about \$360m for malaria, TB and HIV drugs,⁷ while PEPFAR, through the Partnership for Supply Chain Management, provided pharmaceutical products worth \$20m per month to support HIV and AIDS projects across the globe.⁸

Within the scope of these commendable programmes, which have, together, saved millions of lives, the overarching issues related to product selection, procurement, warehousing, distribution, rational use and quality assurance of medicines naturally lend themselves to the expertise of pharmacists. Arguably, due to the passiveness of pharmacists, other players have jumped onto the bandwagon and are "filling in the gaps", but this is often not without adverse consequences. For instance, cases of poor donation practices during natural disasters have been documented.⁹

Perhaps due to the multiplicity of hands in the process of delivering the life-saving medicines discussed above, efficient pharmaceutical management has been erroneously equated to supply chain functions. The supply chain is important to ensure that a product reaches its intended destination, in the right condition and in a timely manner. However, medicines are not any ordinary commodities and, as such, require special management skills that, for pharmacists, require at minimum a four-year training period to attain. To lose sight of this fact is synonymous with losing sight of the existence of the profession itself.

Curricula review

Although these opportunities herald exciting times for pharmacists, it is important that the profession approaches them cautiously and in a systematic manner. For a start, current pharmacy curricula that place more emphasis on the science of the product, and less on the patient and service processes, need to be reviewed.

In most pharmacy schools in Africa, for instance, concepts of public health are hardly ingrained in the curricula. To have professionals who appreciate their ability to contribute to the community in a broad sense, specific objectives, competencies and roles need to be clearly documented in the curricula. This way, students will always be reminded of what is expected of them once they graduate.

In addition to curriculum review, the teaching methodology needs to promote the function of the professionals when they graduate. This could be achieved by means of electives, placements or internships that foster multidisciplinary interactions. Fellowship opportunities should also be designed to facilitate integration of pharmacists in the public health arena, and also present to pharmacists the array of opportunities at their disposal.

Conclusion

Pharmacy is a dynamic profession. However, in developing countries, the profession has remained stagnant in a quagmire of yesteryear, risking the very essence of its existence. To arrest the waning image of the profession in developing countries, particularly in Africa, there is need to identify service opportunities that would perpetuate the continued relevance of the profession to health systems and communities.

Even though new opportunities in the areas of public health, pharmaceutical supply chain management, pharmacovigilance, regulation, management, rational drug use and others are emerging in different forms and designs, pharmacists appear slow to seize these opportunities and espouse them as their bread and butter. Changes in mind sets, perceptions, curricula and teaching methodologies are some of the ammunition required to catalyse the process of modernising the profession of pharmacy in developing countries. More importantly, the onus is on the profession to carve its tunnel to professional progression or to swaddle itself in the dispensing comfort of yesteryear while others dig its grave.

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