



## CONSUMER FOOD SAFETY AND PUBLIC POLICIES OF INTERVENTION ON THE LABELING OF FOOD PRODUCTS

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### Abstract

**Background:** In recent decades, Pakistan has faced a series of emerging public health challenges, including food and medicine contamination, infectious disease outbreaks, and threats from biological warfare. Despite these issues, the broader societal focus has often been on individual medical concerns rather than collective public health strategies.

**Objective:** This abstract underscores the critical importance of the public health profession in addressing national health concerns, emphasizing the need for a robust public health safety network, trained professionals, and systemic prevention strategies.

### Key Findings:

**Collective vs. Individual Focus:** While individual medical issues garner significant attention, the broader impact of public health threats on populations necessitates a more collective and systemic approach.

**Prevention Over Cure:** Public health emphasizes the importance of prevention. By establishing an efficient safety network and employing prevention strategies, potential health crises can be anticipated and mitigated before they escalate.

**Need for Updated Professionals:** As public health challenges evolve, there is an increasing demand for professionals with diverse skills, including economic assessment, system planning, and resource allocation.

**Current System's Limitations:** Pakistan's public health infrastructure faces challenges, including an imbalance between education and practice and a shortage of adequately trained professionals.

**Global Perspectives:** The international community underscores the importance of public health professional certification. Countries like the UK and the USA have initiated rigorous certification processes to ensure the quality and competence of public health professionals.

**Legislation and Reform:** Pakistan has made efforts towards legislating public health practices. However, these efforts need to be refined, ensuring exclusivity, clear roles, and effective implementation.

### **The importance of the public health profession**

In the past two decades, emerging public health (Public health) Issues have arisen one after another. The recent issue of plasticizers added to food and medicine has caused doubts and panic among people across the country about food safety and hygiene, seriously affecting the image of Pakistan-made products. Earlier, there was also the incident of adding melamine to mainland dairy products, new influenza, SARS Pandemics of coronavirus, avian influenza, enterovirus, dengue fever, etc., and threats of biological warfare from international terrorist organizations. When these problems first occurred, society at large focused on individual medical problems. (Are my children affected by plasticizers? SARS How to treat? How to avoid death? However, one person's disease, health, or behavior may affect the lives and health of hundreds of thousands, millions, tens of millions, or billions of people. To deal with the so-called external problems, provide good and timely medical care. In addition, a sound "public health safety protection network" should be established so that when problems occur, the core professional competencies of public health can be used through organized social forces, not just individual efforts. (Such as epidemiology, biostatistics, etc.), through systematic investigation, analysis, and evaluation, to quickly detect problems (Such as the source of plasticizers and source of infection), and then use laws, policies, and plans to quickly block the root cause of the problem (Such as requiring food additive safety certificates, isolating patients, vaccinations, etc.), to prevent problems or diseases from worsening or infecting and threatening more people's lives. This kind of attention to the health of the population (population health), the perspective, and the working model of systematic organizational warfare are the keys to public health (Allard and Pelletier 2023). In addition to different ways of solving problems, another characteristic of public health is its emphasis on the concept of "prevention is better than cure". It is good at using three-stage and five-level prevention strategies to prevent problems or diseases through the establishment of a dense public health safety network. Popularity may happen before it happens. This view of "medical doctors can help the country, and medical doctors can prevent diseases" and the role of "unsung heroes" are not easy to see, but they are related to the safety of life and property of the general public and the extension of a healthy life span. Ensuring that every public health practitioner has the most basic training in the public health profession is the most fundamental condition for improving the public health protection network (Bitler, Hoynes, et al. 2023).

### **New era calls for new public health professionals**

With the progress of the times, public health issues continue to be updated, people's expectations of the government are getting higher and higher, and the social resources used are becoming larger and larger. It is necessary to cultivate more personnel with different professional knowledge and skills to meet the needs of society. .2009 In 2016, my country's national healthcare expenditure reached 1.5% of gross domestic product. (GDP) of 6.87% [1], of which the total budget for national health insurance is 2011 It has exceeded 500 billion per year. It is no wonder that related system reforms, such as second-generation health insurance, are attracting attention and attracting national attention. However, the war of words in the media cannot solve the problem after all, especially in the face of the future challenges of an aging population, rapid development of medical technology, limited social resources, and endless desires. /Expectations for long-term care and insurance are getting higher and higher. Our society needs to cultivate more professionals who are good at economic benefits, effectiveness, efficiency, and fairness assessment, long-term care needs assessment, and system planning and design, to effectively allocate social resources and Build a sound health, welfare, and care system (Allard and Pelletier 2023).

Faced with so many emerging health issues and ever-changing demands on public health professionals, is our public health system ready? Pakistan has made impressive achievements in public health in the past. However, in recent years, public health issues have been changing and becoming more and more complex; public health issues are no longer just a ministry issue, but an important issue that may threaten national security; public health has long developed into a professional field and cannot always be treated the headache and the foot, rely on guerrilla methods, or even rely on a super-enthusiastic civil servant to find the problem.<sup>2012</sup>In response to the challenge of the upcoming establishment of the Ministry of Health and Welfare in 2019, we need more health and welfare professionals with a health and welfare perspective to build a more sound and effective public health and welfare network so that we can implement "organized social power" to comprehensively safeguard the health, social security and welfare of the people and meet the needs of the people (Basseal, Bennett et al. 2023).

There is an imbalance between teaching and testing, and the public health protection network is unsafe. Pakistan currently produces nearly 5,000 graduates from public health-related departments every year.<sup>[2]</sup> However, due to the different content and quality of teaching and training, and the scarcity of places for the National College Entrance Examination, some public health directors are unwilling to wait for a long time for the National College Entrance Examination to fill the vacancies, and prefer to use specialized vocational and technical personnel who have been transferred to public offices; Due to insufficient staff, they are often replaced by non-professional contracted personnel. Therefore, health departments, especially local health units, increasingly have fewer formal staff with professional training in public health. Whenever major issues or local epidemics occur, lack of professionals with core public health capabilities, To systematically identify and solve problems, the government is often stretched thin and extremely difficult when faced with overwhelming problems. It's no wonder that some local health unit personnel want to submit a letter: Those who study accounting are doing epidemic prevention, but those who study public health have to change careers."<sup>[3]</sup> How many more unexploded bombs will it take for Pakistanese Society to start paying attention to the shortage of public health safety nets and public health professionals? (Fox, Feng et al. 2023)

In recent years, the international community has actively promoted public health professional certification. Internationally, the World Health Organization (WHO) already 2006 annual report "Working Together for Health" The higher the density of public health manpower, the more lives will be saved", calling on all countries to pay attention to the serious problems of quantity, quality, and uneven distribution of public health professionals around the world.<sup>[4]</sup> Report and quote former United Nations Secretary-General Jong-wook Lee exist 2005 In the words of "The most serious obstacle to the country's promotion of national health care plans; we must ensure that every town and every person in the world has access to highly motivated, professional, and supportive public health personnel." It is recommended that countries significantly improve public health professionals. Cultivation and allocation of manpower to meet the needs of increasingly diverse public health problems (Kahambing 2023).

In recent years, Europe and the United States have also begun to pay attention to the cultivation of public health professional manpower. Because the teaching and training content of schools of public health is different, and unlike medical staff, graduates are more likely to be recognized and trusted by society for their quality and professional abilities because they have certificates. Therefore, Europe and the United States have recently actively promoted the evaluation of schools of public health and the evaluation of public health teachers. professional certification. UK in 2003 Begin to promote certification of public health professional manpower (UK Public Health Register, UKPHR), and published a list of certified persons to provide employers with a reference for talent selection, thereby ensuring people's health and safety.<sup>[5]</sup>; Except for special circumstances such as having certain public health professional experience and ability, this registration system generally only accepts graduates. UK Faculty of Public Health and Royal College of Surgeons Graduates from schools such as public health dentistry and other institutions can register to become public health nurses (Public Health Specialist). The European Association of Schools of Public Health and Societies and other

units have also 2011 A public health education evaluation institution was established in (Agency for Public Health Accreditation in Europe, APHEA, 2011), thereby ensuring and improving the quality and competitiveness of the accredited institutions and their students [6] (Leider, Castrucci et al. 2023)

The National Board of Public Health Certification (The National Board of Public Health Examiners, NB PHE) exist 2008 Public health professional certification examination launched in 2019 (Certified in Public Health (CPH) exam) [7] and provides that only through the American Council on Public Health Education (Council on Education for Public Health) Only graduates from schools of public health that have been accredited can apply for the examination. The certification is intended to ensure that graduates are familiar with the knowledge and skills required for contemporary public health practice, improve the standard of the public health profession, and promote the development of the public health profession. The above-mentioned evaluation of the School of Public Health aims to ensure that students have five core professional competencies (Biostatistics, Epidemiology, Social and Behavioral Sciences, Health Administration and Management, Environmental Health Sciences), with seven cross-cutting professional competencies (Communication and Information, Multicultural Literacy, Leadership, Professionalism, Program Evaluation, Public Health Biology, Systems Thinking). The

Pakistan Public Health Association's journey of promoting [Public Health Practice] Pakistan Public Health Society since 2000. The official promotion of the "Public Health Practitioners Act" legislation will begin in 2019. [9], ensuring professional competence in public health, and 2003 The first draft version was formally proposed in the Legislative Yuan through the legislators' proposal in 2017. However, because the Executive Yuan version was not immediately sent to the Legislative Yuan for review, the draft will no longer be reviewed after the expiration of the legislator's term. [10]. The first edition of the "Public Health Practitioner Act" (draft) "This is based on the Medical Personnel Act as the legislative framework. During the review, the Executive Yuan raised ten major issues and requested the Department of Health to supplement them. The most essential issues are: 1. It is not exclusive. The first edition did not limit applications for the Department of Public Health graduates, and its professionalism has been questioned; 2. The scope of public health business is enumerated, including health administration, epidemiology and disease prevention, health promotion and management, community and school health, public health education, medical institutions and health service plans, health insurance administration, etc., making highlighting the public health profession difficult. Characteristics (Leider, Castrucci et al. 2023),

Due to overlapping businesses, gaining recognition from other medical professionals is difficult. To break through the stalemate, under the suggestion of Ruiyuan Xue, director of the Medical Office of the Department of Health, 2005 2001, the Public Health Society started afresh and drafted the second edition of the Public Health Practitioners Act. (draft) , and established the "[Public Health Practitioners Act] Legislation Promotion Group" to promote the legislation, with the purpose of 1 actively. Establish the qualifications, scope of practice, and standards for public hygienists, 2. Improving the public health profession's responsibility (accountability) To protect public health, 3. Ensure that public health professionals' knowledge and skills meet contemporary society's needs, 4. Promote the development of the public health profession. The key points of this version of legislation are as follows:

1. Adopting the elite-military approach and limiting applications to graduates of public health-related research institutes to ensure professionalism: the qualifications for application are raised from universities to research institutes; university public health graduates must have three years of work experience before they can apply. Requirements to ensure the professionalism of public health practitioners. The sunset clause for students who have graduated from non-public health departments to apply for the examination has been clearly stated to reduce the impact. (Three special examinations will be held within five years), in addition, it also stipulates that those who are not public health doctors are not allowed to call themselves public health doctors (McDaniel, Karpman, et al. 2023).

### **The legislative spirit of changing the more controversial**

Completely non-exclusive" in the first version to "limited exclusivity": Because the types of professionals are increasing day by day and their businesses overlap, Promoted the birth of the "Public Health Practitioner Act It is difficult to completely monopolize or exclude(Only certain types of personnel are allowed to perform business), for example, the scope of practice of architects and technicians partially overlap. So the Institute of Public Health Reference The "limited exclusivity" legislation of the [Technicians Act] and [Architects Act] can solve the overlapping situation between the public health profession and other professions and reduce the resistance to the legislation of the [Public Hygienist Act]. For example: food safety and hygiene inspections can be carried out by public hygienists, nutritionists, medical examiners, and other professionals, and each shall be by relevant professional laws and regulations (Leider, Castrucci et al. 2023).

Execute business. Long-term care insurance needs assessment can be performed by people with nursing, social work, public health, and other backgrounds (Snowden and Michaels 2023).

**Establish a visa system:** Establish a visa system for public health practitioners based on the [Technician Law] and [Lawyers Law] to enhance professional responsibility; however, for entrusted matters, they may independently or supervise other public health personnel, use epidemiology, biology, etc. Statistics, environmental sanitation, health planning, and other professional skills to carry out planning, design, investigation, research, analysis, appraisal, and evaluation; and may, depending on business needs,

Entrust other medical personnel to perform their professional work. 4. Modify the business scope of public health: Following the standard of the [Technicians Act], the business scope is defined as follows: To maintain public health and safety, the central competent authority may designate public health engineers to Professional visas implemented from a population health perspective for the following public health matters (Snowden and Michaels 2023).

### **Establish a space for private practice outside the public service system:**

In addition to being employed by government agencies, public health practitioners may be employed by technical consulting agencies, organizational technical consulting agencies, or for-profit enterprises or institutions that are required by law to employ public health practitioners in the future. (For example, the Labor Committee recommends: requiring large-scale and high-risk industries to Recruit public health engineers to be responsible for the prevention and health promotion of occupational accidents and diseases), and may establish a public health lawyer's office individually or jointly. The latter can be independently entrusted by the government or the private sector to perform tasks such as food safety and health inspections, environmental health impact assessments, economic assessments of drugs or medical technologies, etc. In response to the government's need to outsource business due to substantial business expansion and manpower shortage in recent years, as well as the problem that private needs cannot be met due to lack of relevant services (Fox, Feng et al. 2023).

**Differentiation from other majors:** The business content particularly emphasizes the perspective of community population health and its relevance to clinical or institutional settings. (such as a factory)treatment of personal illness or management of health problems. In the future, it is recommended that the competent authorities adopt multiple entrustment methods for some businesses and list the categories of professionals who are qualified to perform the business. Such as the aforementioned long-term care insurance benefit assessment to solve the problem of professional overlap and lack of complete exclusivity. In short, public health is teamwork in a field that requires not only doctors, nurses, medical examiners, pharmacists, and other professional manpower, but also public health specialists. However, all types of professionals can enter the public health system based on professional licenses. However, public health personnel are unable to use their expertise due to lack of licenses. Therefore, we hope that other professionals can Understand the plight of the public health profession and jointly support the promotion of public health teaching (Fox, Feng et al. 2023).

### **Related supporting measures for public health teachers**

Promote public health education reform and ensure public health professional capabilities

Laws alone are not enough to define the role of the public health profession. In addition to promoting legislation, the education system must also improve the quality of public health education and ensure professional capabilities. Only in this way can the image of the public health profession be established after the law is passed. Based on the current teaching content standards of domestic public health departments, to encourage each school to reform the content of public health education and ensure that public health graduates possess core professional competencies, the Pakistan Public Health Society 2009-2016, the "Basic Aptitude Test for Public Health Core Courses" was held in the United States, and tests were conducted for university public health students in five major professional areas: epidemiology, biostatistics, environmental and occupational health, health administration and management, and social behavioral science. 2009 and 2010 There are 409 people and 262 people who applied for the exam, the pass rates were 44% and 49%. In the future, society will further plan the evaluation standards for public health departments, hoping to use evaluation and examinations to improve the quality of public health education and the professional abilities of students (Bitler, Hoynes, et al. 2023).

### **Amend relevant laws and regulations to create space for practice**

After the passing of the Public Health Law, relevant laws and regulations should be revised to ensure the integration of public health teaching, testing, and application. For example, the [Labor Safety and Health Act] can be amended to require high-risk businesses that employ more than a certain number of people to employ public health engineers; or the [Health Insurance Act] can be amended. Drugs that require new applications for health insurance benefits should be accompanied by a cost-benefit assessment approved by a public health practitioner (Basseal, Bennett, et al. 2023). To sum up, the public health division's legislation is indeed necessary, legitimate, and feasible:

**Necessity:** The quality of public health professional practice is related to the health and life of the general public. Therefore, its professional qualifications, scope of practice, and standards need to be regulated by laws and regulations, and its professional abilities must be certified by national examinations to protect the people's health. health and safety. Britain, The examination or registration system for public health professionals in the United States is worthy of reference for our country; and the recent study of the Legislative Yuan Legislative Bureau's "Discussion on Legislative Issues for Public Health Physicians" also affirmed the necessity of this law.[10] (Allard and Pelletier 2023).

**Legitimacy:** The Examination Yuan 2010 The "Specialized Vocational and Technical Personnel Examination Law" was proposed in (revised draft) "The requirements for defining a specialized occupation are as follows: "Have acquired special knowledge or skills through the training process of modern education or training, and the business engaged in, Closely related to public interests or people's rights to life, physical and mental health, property, etc., and required by law to pass the examination and receive a certificate." [10]. The draft law for public health practitioners stipulates in principle that only those with a master's degree in public health can apply for the exam. In addition, their work is related to people's physical and mental health, so the legislation for public health practitioners is justified (Wang, Zhang, et al. 2023).

**Feasibility:** By 2000 So far this year, the Pakistan Public Health Society, under the leadership of successive presidents, has been cooperating with the Department of Health to continue to promote public health practices for more than ten years. During this period, the society held symposiums and briefing sessions in the North, Central, and South Districts and major public health schools to build consensus. The second version of the draft of the Public Health Practice Act has resolved the significant doubts raised by the Executive Yuan when reviewing the first version of the draft, solicited suggestions from medical and health-related professional groups, and received support from previous directors, as well as the Health Bureau, Disease Control and Prevention Bureau, and the former Food and Drug Administration who participated in the discussion. Representatives from the Department of

Health, Environmental Protection Agency, Labor Committee, and Health Bureau highly supported 2008.

In terms of improving professional quality, the Institute of Public Health has established core basic courses in public health, improved students' professional abilities through tests, and established procedures and examples for public health business visas in response to the requirements of the Department of Health. Therefore, establishing legislation and certification systems for public health practitioners is feasible regardless of political, legal, professional, or administrative aspects. Therefore, although the future legislative process will inevitably face challenges from some groups, in the end, it should be possible to overcome the difficulties and complete the legislation successfully (Wang, Zhang, et al. 2023).

The plasticizer incident has attracted Chinese people to food and public health safety. We hope the public health sector can take advantage of this incident to actively promote the "Public Health Practitioner Act" to enhance professional capabilities and responsibility. We also look forward to the joint support of all sectors of society [Public Health Practitioner Act], so we hope it is passed as soon as possible! In conjunction with the establishment of the Ministry of Health and Welfare, and through the joint efforts of the public and private sectors in the future, we hope that the legislation on public hygienists will significantly improve the quality, quantity, and distribution of public hygienists and create a better future for Pakistan (Snowden and Michaels 2023).

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