

Conceptual foundations of the new public health

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Abstract

This paper discusses the origins and content of the framework that guided the creation of the Center for Public Health Research in 1984 and the modernization of the School of Public Health of Mexico, established in 1922. These two institutions eventually merged with the Center for Research in Infectious Disease to create, in 1987, the National Institute of Public Health of Mexico, one of the leading institutions of higher education and research in public health in the developing world.

Keywords: public health; public health education; health services research

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Resumen

En este artículo se discuten los orígenes y contenido del marco conceptual que orientó la creación del Centro de Investigaciones en Salud Pública, en 1984, y la modernización de la Escuela de Salud Pública de México, que se estableció en 1922. Estas dos instituciones eventualmente se fusionaron con el Centro de Investigaciones sobre Enfermedades Infecciosas para crear, en 1987, el Instituto Nacional de Salud Pública de México, una de las instituciones dedicadas a la educación superior y la investigación en salud pública líderes en el mundo en vías de desarrollo.

Palabras clave: salud pública; educación en salud pública; investigación sobre servicios de salud

Conceptual foundations of the new public health

The *Instituto Nacional de Salud Pública* (INSP) is one of the leading institutions of higher education and research in public health in the developing world. Its institutional design was based on a reflection about the existing ideas of public health and a conceptual framework to guide a new research and education agenda. This paper discusses the origins of that framework and its role in the creation of the *Centro de Investigaciones en Salud*

Pública (CISP)* in 1984 and in the modernization of the School of Public Health of Mexico (*Escuela de Salud Pública de México*, ESPM), established in 1922. These two institutions eventually merged with the *Centro de Investigaciones sobre Enfermedades Infecciosas* (CISEI) to create INSP in 1987.

* The original name of this center was *Centro de Investigaciones en Salud Pública*, and it was changed in the 1990s to *Centro de Investigación en Salud Poblacional*.

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Engines of change: research and education in public health

The year 1983 marked the start of a profound reform process that was launched in Mexico under the overarching rubric of “structural change in public health”.¹ The guiding principle was the notion that health care is not a merchandise, an object of charity or a social privilege, but a social right. This means that all citizens, regardless of their socioeconomic or labor status, should have access to comprehensive health care.

This conception required a new legal foundation, which was established with the addition of the right to the protection of health to the Mexican Constitution in 1983 and the approval of a new General Health Law in 1984.²

The accompanying *National Health Program 1982-1988* introduced five reform strategies: decentralization, institutional sectorization, administrative modernization, intersectoral coordination, and community participation.

The reform also developed two components, which were named “the engines of change”: scientific research and human resource development.³ The promotion of scientific research was materialized through the creation of two health research institutions in 1984, CISEI and CISP. The human resources component included the academic modernization of ESPM, which started in 1983.

In this context of reform, the Minister of Health, Guillermo Soberón, proposed the creation of a new national institute of health, INSP, through the integration of CISP, ESPM and CISEI. This new institute was established on January 27, 1987.

Conceptual foundations of the new public health

The basic ideas of the framework that gave birth to CISP helped modernize ESPM, and established the foundations of INSP were discussed in three papers: “An innovative approach to public health research: the case of a new center in Mexico”, published in the *Journal of Health Administration Education* in 1986; “A conceptual model for public health research”, published in the *Boletín de la Oficina Sanitaria Panamericana* that same year; and “The new public health”, published in the *1993 Annual Review of Public Health*.⁴⁻⁶

These articles first discuss the definition of ‘public health’. According to the proposed framework, the term ‘public’ refers to a specific level of analysis—the population level—, while the term ‘health’ refers to two objects of analyses, health conditions of population and the organized social response to those conditions. It also

conceptualizes public health as both a multidisciplinary field of inquiry and an arena for action. As a field of inquiry, public is defined “as the application of the biological, social, and behavioral sciences to the study of health phenomena in human populations”.³

To identify the role of public health within the more general field of health research, these papers relate the various levels of analysis of health sciences to their objects of analyses, as illustrated in figure 1.⁶

Level of analysis	Object of analysis	
	Conditions	Responses
Individual and sub-individual	Biomedical research (basic biological processes; structure and function of the human body; pathological mechanisms)	Clinical research (efficacy of preventive, diagnostic and therapeutic procedures, natural history of diseases)
Population	Epidemiological research (frequency, distribution, and determinants of health needs)	Health systems research (effectiveness, quality, and costs of services; development and distribution of resources for care)

Source: Frenk J. The new public health. *Annu Rev Publ Health*. 1993⁶

FIGURE 1. TYPOLOGY OF HEALTH RESEARCH

The intersection of the two dimensions generates the three types of health research: biomedical, clinical, and public health research. Biomedical research is involved with the conditions, processes, and mechanisms of health and illness, especially at the sub-individual level. Clinical research concentrates largely on studying the efficacy of the preventive, diagnostic, and therapeutic responses to health needs in individuals. Finally, the two objects can also be analyzed at the population level, which is what public health research does. This research is subdivided in two types: epidemiological research, which studies the frequency, distribution, and determinants of health needs,⁷ and health systems research, which can be defined as the scientific study of the organized social response to health and disease conditions in populations.⁸

In the discussion of public health research, there is an emphasis on the need for interdisciplinary integration and a criticism to the tendency to identify each level of analysis with a specific discipline.³ The inclination to suggest that biological sciences are applicable only to the sub-individual and individual levels, and that the population level is the sole jurisdiction of the social

sciences is questioned. All human populations are organized in societies, and that is the reason why social sciences are crucial for understanding health in populations. However, there is also a biological dimension of human populations. The field of tropical diseases offers countless examples of the linkage between biological and population phenomena. That is why, in this conceptual framework there is an explicit emphasis on the relevance of biological sciences to population health, which many schools of public health have neglected in the recent past.

Finally, one of the papers, "The new public health", explores the intellectual evolution of the field, which has at times focused on the prevention or treatment of disease, and at others on a broader concept of health including human development and well-being; it has also evolved from a narrower view of the individual or family as the object of intervention, to a more comprehensive focus on the biophysical and social environment within which people live.⁶

Use of a conceptual framework for institutional design

The organizational structure of CISP reflected the conceptual framework discussed above. In addition to a general director, the center had three associate directors for research on health needs, on organization of health systems, and on health policy. Each associate director coordinated the work of various research teams. The associate director for health needs coordinated three of them: positive health, health risks, and health harm. The associate director for health systems coordinated the work of two teams, one devoted to research on health resources and another one devoted to research on health services. Finally, the associate director for health policy coordinated the work of two more teams, one dealing with socioeconomic structure and health, and the second one devoted to research on policy formulation. The three basic areas were supported by a planning and management department and a department for academic resources (publications, library, and scientific events).

As can be seen, the research areas did not follow conventional disciplinary lines, but were problem oriented. This focus facilitated the implementation of interdisciplinary projects and the definition of research priorities. In its initial stages, CISP identified two priority focal problems: epidemiologic transition and primary health care, each with three research lines. The research lines on epidemiological transition were epidemiology of emerging conditions, migration and health, and child survival. The research lines on primary health care were social organization and primary care, health systems

management, and quality of care. There was a third focal area devoted to methods for public health research.

The conceptual framework that influenced the organizational design of CISP also shaped the modernization of ESPM, which had started in 1983 and included the renewal of its teaching programs, the reestablishment of its links with research, and its focus on graduate training.^{9,10} The formal relationship between CISP and ESPM started in 1985 when they co-coordinated two teaching programs: the Advanced Training Program in Organization and Management of Health Services (PROASA), financed by the Kellogg Foundation, and the Training Program for Executives of the New Reconstruction Hospitals, which was created immediately after the 1985 Mexico City earthquakes.¹¹

The merger of ESPM and CISP with CISEI to create INSP in 1987 represented a quantum leap in the development of public health research and education. A paper presented in June of 1987 at the international symposium "Public health for the 21st century: strategies for higher education and research", which followed the ideas of the conceptual framework that gave birth to CISP, stated that public health as a field of inquiry requires the research function for the production of knowledge and the teaching function for its reproduction.¹²

Primary orientation of academic institutions

The discussion of the main orientation of an institution devoted to research in public health was also addressed in the establishment of CISP and, eventually, in the creation of INSP. According to the three papers mentioned above, there are two primary orientations of research institutions: solving concrete health problems (research *for* health) and advancing knowledge (research *on* health).⁴⁻⁶ In the health field, research centers embedded in public agencies, such as ministries of health, tend to develop research for health. Universities, in contrast, tend to prioritize the advancement of knowledge and develop research on health. Evidently, both types of research can be developed at both kinds of institutions, with different emphasis usually. The way to resolve this "identity issue" is striking a realistic and reasonable balance between research *for* and research *on* health.

A related balance is that between relevance, excellence, and independence. Public health research should be useful, but to guarantee this, it needs to meet all scientific standards of excellence and be independent of any kind of political pressure. If treated essentially as government agencies, research centers will tend to privilege conformity and political loyalties over critical thinking and academic excellence, and their products,

ideologically oriented, will be of little use to the solution of local or national problems.¹³

The conclusion of the three papers mentioned above in this regard is that “[...] these balances are especially difficult to achieve at government research centers in fields such as public health that are concerned with processes closely related to decision-making”.⁴⁻⁶ The consolidation of the conditions to guarantee their independence and the promotion of critical thinking is, no doubt, a task of utmost importance.

Challenges to the new public health

We are at the heart of a tense and intense health transition unlike anything humankind has experienced before, which is linked to broader environmental, demographic, social, and economic transformations. Today, our world is both more complex and more interdependent. We have been empowered by the success at fighting common infections and malnutrition but humbled by the magnitude and scope of new pandemics, now closely related to a flawed relationship with our environment.

We are still dealing with many of our greatest challenges: preventing disease, promoting healthy lifestyles, delivering high quality care to everyone who needs it, and protecting families from the financial consequences of ill health. However, we should remain optimistic about our capacity to face this increasingly intricate health reality. This is because a new era in public health is being fueled by major innovations in life sciences and telecommunications,¹⁴ and by what Michael Ignatieff has called the rights revolution, which is turning abstract declarations about human rights into concrete entitlements that people can be empowered to demand.¹⁵

Additional progress in public health will depend on the capacity of academic institutions to integrate these revolutions. Integration must occur across disciplines. Already, the most exciting advances in science are taking place at the intersection of traditional fields, as exemplified by genomics and bioinformatics, epidemiology and environmental science, and health systems and political science. But we need to go further. There is also a need to integrate across levels of analysis, so that we may examine specific health problems from the genes to the globe.

We should also move further ahead in the integration between the values of excellence and relevance,

which means that while we pursue the highest standards of scientific rigor, we are at the same time providing solutions to the most pressing health challenges, local and global.

As we enter a new era of public health research and education, knowledge will continue to be the key asset to sharpen our understanding of problems and our capacity to innovate, which will, in turn, provide solutions to the complex challenges of our times.

Declaration of conflict of interests. The authors declare that they have no conflict of interests.

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