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HEALTH, NUTRITION, AND POPULATION SERIES

This series is produced by the Health, Nutrition, and Population Family (HNP) of the World Bank's Human Development Network. It provides a vehicle for publishing polished material on the Bank's work in the HNP sector, for consolidating previous informal publications, and for improving the standard for quality control, peer review, and dissemination of high quality analytical work.

The series focuses on publications that expand our knowledge of HNP policy and strategic issues that can improve outcomes for the poor and protect vulnerable populations against the impoverishing effects of illness. Best practice examples of both global and regional relevance are presented through thematic reviews, analytical work, and case studies.

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EXECUTIVE SUMMARY

- The World Bank's commitment to achieving good health, nutrition and population outcomes, including its commitment to the Millennium Development Goals and the adoption of a Poverty Reduction Strategy framework, underscores the importance of embracing the principles and practices of public health. Effective public health interventions are directly related to achieving the Millennium Development Goals. Public health knowledge, advisory services and capacity building are key instruments for development effectiveness.
- For Bank operational purposes, major public health functions can be grouped into five basic categories: policy development; collection and dissemination of evidence for health policies, strategies and actions; prevention and control of disease; inter-sectoral action for better health; and human resource development and capacity building.
- A wide range of activities fall within these basic categories of public health functions, such as surveillance, regulation, evaluation, social mobilization, disease prevention and control and workforce development. Classifying public health functions into a limited number of categories helps to define essential public health functions within each country context, assess public health performance gaps and estimate financial investment needs in public health.
- Public health functions are complementary to and supportive of more traditional, vertical program approaches. They provide important mechanisms for monitoring and evaluation in country-specific efforts, in the formulation and implementation of Poverty Reduction Strategies and in Bank projects.
- Strategic options for an enhanced World Bank role in public health at the country level include prioritizing public health action in policy dialogue and lending; assessing performance of public health functions; including public health functions in poverty reduction strategy papers, country assistance strategies and comprehensive development frameworks; and customizing solutions and investments.
- In addition to the role of public health in the Bank's *country* operations, the Bank has complementary and mutually reinforcing *global* roles in public health. These include: a) managing and disseminating knowledge on public health and public health functions; b) conducting analytic work related to public health functions; c) selectively engaging in global health initiatives that will help countries make measurable progress towards their health, nutrition and population goals; d) building capacity for poverty reduction; and e) improving Bank and client performance.

- Health, nutrition and population (HNP) staff must take the lead to facilitate and monitor the application and strengthening of public health perspectives at the country level. Financially and otherwise, the Bank is already engaged in many country-level dimensions of public health. However, in order to increase its effectiveness, the Bank should broaden and deepen that engagement within and across the five categories of public health activities. Doing so is consistent with the Bank's global and HNP missions, its values, its multi-sectoral character and its institutional areas of comparative advantage.

Introduction

The twentieth century witnessed greater gains in health, nutrition and population outcomes than at any other time in history. These gains are partly the result of improvements in income and education, with accompanying improvements in nutrition, access to contraceptives, hygiene, housing, water supplies and sanitation. They are primarily the result of new knowledge about the causes, prevention and treatment of disease, and the introduction of policies that make such interventions more accessible.

As a result of complex synergies among income levels, education, behavior, public policy and health services, people now live almost twenty-five years longer than they would have at similar income levels in 1900. Many of the interventions that have improved health are attributable to environmental changes and are the result of public health actions. The control of diarrheal diseases, including

the development of oral rehydration therapy to reduce child mortality, is one example. Smallpox eradication made possible through a combination of advances in public health research and effective program management, is another example of a successful twentieth century public health effort.

However, the improvements in health status and life expectancy have not been equally distributed. The health status and life expectancy of the poorest nations lag behind the rest of the world. Within countries, the health of the poor is worse than that of the rest of the population. Poverty is the most important underlying cause of preventable death, disease and disability; and there is growing recognition that poor health, malnutrition and large family size are key determinants of poverty (Claeson et al. 2001). Beyond the health sector, literacy, the status of women, housing quality, safe water, sanitation, food supply and

urbanization are other key determinants of health status that interact with poverty.

For these reasons, enormous challenges remain (adapted from Merson et al. 2000):

- More than 10 million children below age 5 die each year from preventable causes; 70 percent of these deaths are due to pneumonia, diarrhea, malaria, malnutrition and measles;
- More than 150 million married women who want to space or limit child bearing do not have access to modern contraceptives;
- Nearly 600,000 women die annually from complications of pregnancy and childbirth, and another 18 million suffer pregnancy-related health problems that can be permanently disabling;

- Each year 13 million persons die from infectious diseases, most of which are preventable or curable; half of these deaths are in adults and are due to tuberculosis, malaria and HIV/AIDS;
- Thirty percent of the world is still without access to safe water and sanitation systems; and
- As populations age and the tobacco epidemic takes hold, most developing regions are likely to see noncommunicable diseases become leading causes of disability and premature death. Over the next twenty-five years, millions of adults will be affected by heart diseases, depression, stroke, cancers and chronic respiratory diseases. Traffic injuries are already emerging as a major threat to health in developing countries.

The World Health Organization's *World Health Report 1999* identified four major challenges to world health (WHO 1999) that the international community must address: reduction of excess mortality and morbidity among the poor; investing in research and development directed toward diseases of the poor; countering threats to health resulting from economic crises, unhealthy environments and risky behaviors; and development of more effective and efficient health systems that can improve health status, reduce health inequities and enhance responsiveness to clients' expectations.

The Bank has given increasing attention to health in recent years. Bank

lending and analytical work in the health sector have grown dramatically, peaking above \$2 billion in new commitments in FY96 and FY98. The work is guided globally by the Bank's 1997 health, nutrition and population (HNP) sector strategy, which posits three overall goals for the Bank in health—improving health outcomes for the poor, increasing the efficiency of health care and other services, and facilitating sustainable health financing (World Bank 1997a).

The Bank is well placed to increase its contribution to national and global efforts to address the challenges to health in this new decade, as shown by its commitments to:

- the Millennium Development Goals, particularly the goals involving maternal and child health, nutrition, poverty and the major communicable disease targets;
- Poverty Reduction Strategies (PRSs), with growing emphasis on poverty and health outcomes, linking actions at the household level with government policy and action;
- global public and private partnerships to deal more effectively with cross-border health issues and global public goods; and
- sustainable development and a cross-sectoral approach to dealing with multi-sectoral determinants of health and nutrition.

This strategy note is meant to contribute to debate about the appropriate roles, functions and services of developing-country institutions and

their partners in addressing health issues. The intended audience includes HNP operations staff; developing-country managers with health-related responsibilities; country and sector managers; staff in other sectors whose work has significant health impact; and, health policy analysts. The note will be accompanied by a Public Health Resource toolkit/web-site providing practical, operationally oriented tools, best practices and guidance derived from interviews with Bank staff as well as contributions from partner agencies. The toolkit will assist Bank staff and clients in identifying, analyzing and financing public health functions appropriate to the epidemiological, financial and institutional capacities of individual borrowing countries. Information on specific public health interventions is already available in the form of *Public Health at a Glance Fact Sheets* (World Bank 2001a). The toolkit will promote best practices by including guidelines, tools, lessons learned, terms of reference, pointers to resource institutions and useful references.

What then is public health? What are its scope and boundaries? Why is investment in public health important to the Bank and what is its institutional comparative advantage? What public health actions are needed to achieve the Millennium Development Goals? In the twenty-first century, what public health interventions can contribute to improving the health of poor people? What aspects of public health are important to the Bank's policy dialogue, knowledge management and lending? How can the Bank use the tools of public health to

improve the content and quality of its portfolio in health and other sectors?

This note explores some of these questions, to promote a common understanding of public health with-

in the Bank that is relevant to its operational context and to identify public health approaches to help the Bank meet its corporate goals and objectives.

1. What Is Public Health?

Concepts of public health have existed for millennia. Hippocrates' book *Airs, Waters, and Places*, written around 400 BC, represented the first systematic effort to present a causal relationship between environmental factors and disease and to offer a theoretical basis for understanding endemic and epidemic diseases. Early in the twentieth century, C.E.A. Winslow proposed this definition: "Public health is the science and the art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease and the development of the social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health" (Winslow 1920).

Public health attributes responsibilities at both the individual and the collective level. Social action in health has underpinned the evolution of public health over the centuries and today social justice is a major pillar of public health. Its basic tenet is that acquired knowledge about how to ensure a healthy population must extend equally to all groups in any society. Public health professionals work to overcome the barriers caused by differences in gender, social class, ethnicity and race that prevent available tools and interventions from being applied equally (Merson et al. 2001). Public health is also notable for embracing clinical care and for emphasizing the link between poverty and ill health and the importance of equity in material well-being.

Note that despite the emphasis on social actions, public health is not the equivalent of publicly provided or financed health care. So the public

health budget—to the extent that a country may have one—is not the same as the publicly financed budget for health services but is usually a subset of it.

A Working Definition: Public Health Categories and Functions

The American Public Health Association has synthesized the many definitions and perspectives on public health and identified six basic principles of contemporary public health theory and practice (APHA): a) emphasis on collective responsibility for health and the prime role of the state in protecting and promoting the public's health; b) focus on whole populations; c) emphasis on prevention, especially the population strategy for primary prevention; d) concern for the underlying socioeconomic determinants of health and disease, as well as the more proximal risk factors;

e) multi-disciplinary basis which incorporates quantitative and qualitative methods as appropriate; and f) partnership with the populations served.

The Pan American Health Organization (PAHO), in collaboration with the U.S. Centers for Disease Control and Prevention (CDC) and the Latin American Center for Health Research (CLAISS), has built upon the APHA's work and that of WHO (Bettcher et al., 1998). Through rigorous field testing in several countries in Latin America and the Caribbean and a consensus building process with ministries of health, academicians and international organizations, they have proposed eleven "essential" public health functions (see Annex 2). PAHO/CDC/WHO are now field testing ways to measure how well health care systems perform the various public health functions (PAHO May 2000).

For the World Bank's operational purposes, the major public health functions can be grouped into five categories:

- policy development;
- collecting and disseminating evidence for health policies, strategies and actions;
- prevention and control of disease;
- inter-sectoral action for better health; and
- human resource development and capacity building.

Each of these basic public health categories includes a wide range of

activities, as shown in Table 1. These activities include the essential health functions identified by others, but include additional approaches as well, such as controlling a variety of risk factors, generating better knowledge and creating the human capacity and policy environment to make full use of that knowledge.

Grouping public health functions into a limited number of categories helps to define which ones are essen-

tial within each country context and to assess public health performance gaps and public health investment needs. The scheme proposed here corresponds well with other organizations' classification of public health services and performance measurements and tools.

The challenge for many countries and their partners, including the Bank, is to decide which public health functions and activities should be undertaken,

Table 1. Public Health Categories and Examples of Functions

1. Policy development

- Public health regulation and enforcement*
- Evaluation and promotion of equitable access to necessary health services*
- Ensuring the quality of personal and population-based health services*
- Health policy formulation and planning
- Financing and management of health services
 - Pharmaceutical policy, regulation and enforcement

2. Collecting and disseminating evidence for public health policies, strategies and actions

- Health situation monitoring and analysis*
- Research, development and implementation of innovative public health solutions*
- Provision of information to consumers, providers, policymakers and financiers
- Health information and management systems
- Research and evaluation

3. Prevention and control of disease

- Surveillance and control of risks and damages in public health*
 - Management of communicable and non communicable diseases
- Health promotion*
 - Behavior change interventions for disease prevention and control
 - Social participation and empowerment of citizens in health*
- Reducing the impact of emergencies and disasters on health*

4. Intersectoral action for better health

- Environmental protection and health, including road safety, indoor air pollution, water and sanitation and vector control in infrastructure, Management of medical wastes; tobacco control including taxation; school health/education

5. Human resource development and capacity building for public health

- Development of policy, planning and managerial capacity *
- Human resources development and training in public health*
- Community capacity building

**Same as PAHO /CDC/WHO "essential" public health functions (PAHO May 2000).*

when and by whom. Middle- and low-income countries differ widely in the status of health infrastructure, in their capacity to respond to health needs of the population, and in the stage of development of the health care system. Depending on country-specific circumstances and resources, some of the public health functions considered “essential” may not be relevant or achievable in the short or even medium term. International discussions are underway to prioritize the “essential”

public health functions and to assist countries to select those functions most relevant for local circumstances and resources. This is expected to be more sensible and valuable than trying to establish priorities among different diseases or problems.

Boxes 1 through 4 provide examples of best practices in Bank operations in several public health functions: surveillance, road safety, indoor air pollution and school health.

Box 1. Brazil Disease Surveillance and Control Project (VIGISUS)

The Brazil Disease Surveillance and Control Project is implemented by the Ministry of Health in collaboration with the U.S. Centers for Disease Control and Prevention, the CDC Foundation, UNDP, PAHO, and the Bank. The aim is to strengthen the National Surveillance System, with particular emphasis on the health of indigenous populations. The project provides decentralized training for staff (municipal, state, and federal) in epidemiology, disease prevention and control, environmental surveillance, laboratory reporting, and management. International technical assistance focuses on support for studies and research in epidemiological and environmental surveillance as well as on use of surveillance data for decision making. A public health laboratory network is being rehabilitated, expanded, and equipped while the telecommunications system is upgraded for data management.

This project has been key in supporting the decentralization process of the health sector and in strengthening the institutional capacity. The innovative field epidemiology training has provided opportunities for local surveillance workers to work with managers and decision makers in problem solving. Each state has conducted its own diagnostics of the surveillance system and designed an investment plan to address the unfinished agenda. Environmental surveillance has legal support, comprising intersectoral collaboration.

The indigenous population lives in 24 out of 27 states, but mostly in the Amazon Basin. One of the biggest challenges in the project is to tailor health services to reach effectively this segment of the population. Seven-percent of the investment, about US\$13 million, is being applied to programs to benefit indigenous people. Activities include strengthening of the participation of indigenous people in planning and policy decisions through district health councils, assuring that all indigenous villages have health posts, special programs aimed at indigenous health issues (for example, alcohol abuse, tuberculosis and nutrition), support for indigenous women’s organizations, and training of both regular and indigenous health workers to improve cultural aspects of service delivery, and to build an indigenous health and demographic data base.

Source: Anabela Abreu, LCSHH, focal person for surveillance in the HNP Network, World Bank.

Why Think in Terms of Functions?

Analyzing public health in terms of functions in addition to specific activities or final objectives is consistent with the World Health Organization’s view that the role of health systems is to carry out a few crucial, general functions. These are: the provision of services that promote health; investment in the corresponding physical and human capacity; financing both provision and investment; and exercising “stewardship” over the whole, including informational, evaluative and regulatory duties (WHO 2000). Some public health activities are investment (e.g., training), some are service delivery (disease management) and several correspond to stewardship (regulation, quality assurance, information). The boundaries and scope of public health are discussed more fully below, but some general statements can be made about the role of public health functions in the context of health systems.

*Public health functions describe a spectrum of competencies for health systems that are fundamental to the principles of stewardship, the one role of the state that cannot be left to the market. Public health functions are required to fulfill responsibilities in promoting and assuring access, quality, accountability and empowerment of citizenry in health through health monitoring, surveillance, regulation, evaluation, social mobilization, disease prevention and control, and workforce development. While the *World Development Report 1997* (World Bank 1997b) underscores the limits of state capability and proposes ways of augmenting it, the *World**

Health Report 2000 (WHO 2000) emphasizes the state's responsibility to serve as steward for the global societal interest in improving health outcomes. Putting together the messages of *WDR 1997* and *WHR 2000* implies the need to use limited public capacity where it is most crucial, to "row less and steer more." However, because so many public health activities are at least partly public goods—and because improvements in public health will particularly benefit the poor—the state role in investment and provision may need to be larger in public health than in clinical care. The stewardship function implies a long-term view of public action and public health, and a sense of responsibility not only for collective health outcomes in the present generation but also for those in future generations.

No particular organizational structure is inherent in public health functions.

Public health functions are complementary to more traditional vertical programs and offer a framework in which to conduct them. "Defining and measuring the essential public health functions should contribute to the institutional development of public health and to a better dialogue between public health and other disciplines working in public health. Moreover, better definition of what is essential should help to develop more precise definitions of institutional responsibilities in the delivery of public health interventions. Of particular interest is the delineation of responsibility between the public and private sectors" (PAHO October 2000). Roles and responsibilities can be identified and assigned to a variety of partners working cooperatively, including government, the private sector, non-

governmental organizations and civil society, based on factors such as experience, skills, capacity and access to populations.

Mechanisms for monitoring and evaluation are inherent in several public health functions (health situation monitoring and analysis, surveillance, disease prevention and control, human resources development in public health). These functions are required to select and track key intermediate and outcome indicators to show whether progress is being made in achieving the Millenium Development Goals and improving the health of poor people, to test the effect of policies and programs, and to adjust policies and programs as needed. They are therefore essential to formulating and evaluating poverty reduction strategies and Bank investment projects.

Public health functions emphasize institution and capacity building for sustainability. Public health functions pro-

vide a framework for developing the appropriate machinery for policy making and decision making, and for planning and evaluation in the health care system. "In many ministries of health, this apparatus remains rudimentary: the budgeting is separate from the planning, which is separate from the epidemiology, which is separate from the demography and vital statistics divisions" (Morrow 1997). Correcting this situation means developing capacity for monitoring, investigation, educating, community mobilization, legislation, regulation and workforce development. With these capacities, a country can readily adapt to changes in its health profile and deal with new challenges as they arise. Table 2 provides examples of how public health functions can be applied in different health areas (adapted from PAHO October 2000). Regulating taxes on tobacco is an example of a regulatory activity to promote health behaviors that prevent major damage to health.

Table 2. Selected Public Health Functions (PHF) Applied to Various Health Concerns

PHF	Applied to:				
	Environmental Health	Occupational Health	Maternal and Child Health (MCH)	Chronic Diseases	Communicable Diseases, Etc.
Health Situation Monitoring and Analysis	Monitoring of environmental risks	Monitoring of risks in the workplace	Monitoring of the risks in MCH problems	Monitoring of the risks of chronic diseases	Monitoring of risks and incidence of communicable diseases
Public Health Regulation and Enforcement	Monitoring of compliance with environmental regulations	Monitoring of the laws to protect workers	Monitoring of compliance with the laws protecting mothers and children	Monitoring and regulation to promote healthy behaviors that prevent major damage to health.	Monitoring and regulation to prevent and control communicable diseases
Etc.					

2. What Are the Scope and Boundaries of Public Health?

Defining health objectives and identifying the functions needed to achieve those objectives do not fully clarify just how far the sphere of public health extends. Two important issues in particular are often misunderstood—the relationship between public health and clinical care, and the place of public health in overall health system functioning and development.

The Scope of Public Health

The determinants of health are not limited to the health sector. Sanitation and access to water influence disease incidence and mortality, particularly in young children. Agricultural policies and practices can dramatically affect food prices and household food security, resulting in acute or chronic malnutrition, especially among poor people. Different forms of indoor and outdoor air pollution with their concomitant health effects (acute respira-

tory infections, asthma) result from use of biomass and fossil fuels. Public health relies heavily on education to improve the knowledge of health workers, educators, schoolchildren and the general public about hygiene and healthy behaviors (e.g., breastfeeding, proper nutrition, immunizations, family planning and HIV/AIDS prevention). The design and maintenance of road infrastructure affect the incidence and severity of injuries to vehicle drivers, passengers and pedestrians. Public health also depends on other sectors than health in addressing equity issues that influence health status. Examples of this are gender-based discrimination, the political situation of certain ethnic or minority groups, or the protection afforded to refugees.

Sometimes several of these associations are relevant at once. For example, the full cost of reaching remote populations for improved health may

include investment in health and nutrition, roads, electricity and education. The responsibility for development and maintenance of this infrastructure rests with other sectors: what matters for public health is to have a role in the decisions of other sectors when those affect health.

Examples of the Bank's work across sectors on road safety, indoor air pollution and school health are given in Boxes 2 through 4.

Public Health and Clinical Care

Public health and clinical services (personal health care of individuals) are sometimes presented as mutually exclusive entities. However, differential roles may be more a result of how public health organizations are used in a health system than of intrinsic differences. For example, in some countries, immunization services

Box 2. Road Safety: Working Across Sectors with Governments, Civil Society and the Private Sector

The Bank is placing increased emphasis on road safety. At present, about two thirds of transport projects have a road-safety component. The effectiveness of road-safety programs is dependent on partnership between the government, the civil society and the private sector. Thus, along with other donors, the Bank has promoted the Global Road Safety Partnership (GRSP). This tri-sector collaboration aims to find more effective ways to deal with road safety in low- and middle-income countries. It operates in countries where road safety has been identified as a problem, where local authorities have expressed a desire to tackle the issue, and where an agreed framework—such as a national road-safety action program—exists. The focus countries are Poland, Romania, Hungary, India/Bangalore, Malaysia, Thailand, Vietnam, Costa Rica, Brazil, Ghana and South Africa.

The reason for focusing on the issue of road safety is its impact on health and the economy. In 1998, more than one million persons died from road traffic injuries (RTIs) worldwide and many more were injured. The situation is particularly critical in low- and middle-income countries, where 88 percent the world's deaths from RTIs have occurred even though these countries possess fewer motor vehicles than developed countries. Moreover, RTIs are expected to rise in low- and middle-income countries, in contrast to the steady decline in RTIs occurring in recent years in developed nations.

By 2020, road accidents are expected to rise from ninth to third place as the leading contributor to disability-adjusted life years (DALYs) lost in the world. We know now that RTIs can be prevented and that the ensuing burden can be reduced by more and better targeted investment.

Source: Eva Jarawan, MNSHD, focal person for road safety in the HNP Network, World Bank.

Box 3. A Multi-Sectoral Approach to Reducing Indoor Air Pollution

Indoor Air Pollution is a major health risk factor, accounting for 4 percent of the global burden of disease, on a par with tobacco. It is caused by the use of low-cost and widely available energy sources such as coal and biomass (wood, dung, crop residues) for cooking and home heating. Biomass is still the main source of energy for 60 to 90 percent of the population in developing countries, or for 3.5 billion people. The burden is greater in high-altitude rural areas and among the poor, who are more likely to rely on biomass and low quality coal fuels, and especially women and children, who are more likely to be exposed because of their household responsibilities indoors.

Biomass and coal, while cheap and readily available, are extremely polluting and pose serious health hazards due primarily to chronic exposure to particulates, sulfure and nitrous oxides (SO₂, NO_x), carbon monoxide (CO), fluoride (coal), aldehydes and para amino hydrocarbons (PAH). These are well-known risk factors for acute respiratory infection, chronic obstructive lung disease (COLD) and cancer. Chronic exposure to indoor air pollution may also result in low birth weight and increased susceptibility to asthma, tuberculosis and cataract.

Ultimately, most developing countries will move up the energy ladder to petroleum or natural gas, or electricity. However, such a move, while ideal, is neither optimal nor feasible in the short run because the poor have no (or only limited) access to, nor can they afford, high-quality fuel such as LPG, natural gas, or electricity. The World Bank is well positioned for advocacy, inter-sectoral research and interventions to alleviate indoor air pollution in poor rural settings. Multi-sectoral intervention trial initiatives and advocacy efforts are underway in China, India and other high-burden countries to improve access to efficient and affordable energy through local design and manufacturing of low-cost stoves and renewable energy solutions while taking into consideration the adoption of environmentally and socially sound and sustainable energy practices.

Source: Enis Baris, EASHD, focal person for indoor air pollution in the HNP Network, World Bank.

for children are provided entirely by public health organizations with little or no role played by health care service providers or the private sector. In other countries, preventive and cura-

tive health services are provided by public health organizations to the poorest segment of society in a two-tiered system because these populations either do not have access to or

cannot afford services by the “mainstream” health care system. Public health and clinical care are better understood as parts of the whole health care system that form

Box 4. Focused Resources on Effective School Health (FRESH)

School health and nutrition programs provide one of the most cost-effective ways to promote the education, health and nutrition of children, particularly if the programs are developed as part of community partnerships. Such programs are particularly important because they provide one of the most effective ways to reach adolescents and the broader community with messages about HIV/AIDS prevention. School-based health and nutrition programs are not a new concept, but historically they have been inefficient and regressive, usually favoring the better off children in urban centers.

A new, efficient and progressive approach to school health has now been developed by a partnership of agencies, including UNESCO, WHO, UNICEF, WFP and the World Bank. The Focus Resources on Effective School Health (FRESH) program was launched by its sponsoring agencies at the World Education Forum in Dakar in April 2000. It is a framework for action containing four “pillars”: health-related school policies; provision of sanitation and clean water in all schools; a skills-based approach to health, hygiene and nutrition education; and school-based health and nutrition services. The FRESH initiative at the World Bank has assisted countries in developing school-health components worth \$44million in more than twenty projects in Africa.

Source: Donald Bundy, HDNED, focal person for FRESH in the Human Development Department, World Bank.

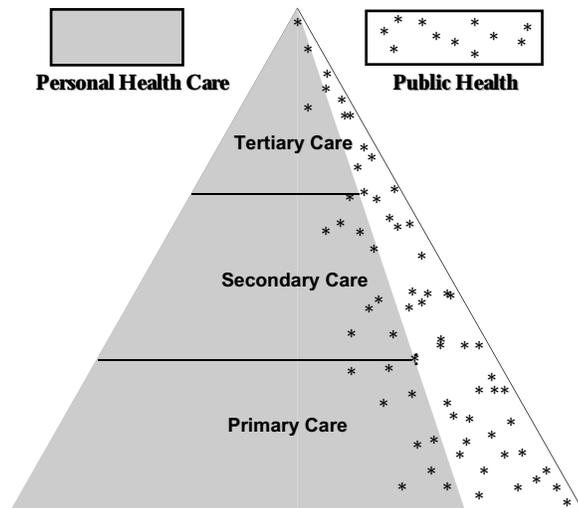
an overlapping continuum, independently of who provides any particular service, rather than as a dichotomy (Figure 1).

Health care professionals (physicians and nurses) diagnose and treat individual patients, one-on-one, for specific diseases or injuries. Public

health professionals, on the other hand, monitor the health of entire communities and populations, emphasize health education, public information, health promotion and disease prevention, develop and promote normative standards for the health of the public, provide education and training to health professionals, and promote healthy practices and behaviors. A population is made up of individuals, so to change behaviors or implement preventive practices in a population, there is a need to focus on individuals and their practices as well as on common determinants for behavior change.

Tuberculosis (TB) illustrates how public health and clinical services are intertwined (Box 5). The health provider contributes to the health of the individual and to public health by diagnosing and treating the patient with an infectious disease that, if untreated, would endanger the health of the general public. The public health professional contributes to public health as well as to the health of individuals by identifying infected persons and by developing treatment guidelines for use by the doctors. In other words, the sum of individual clinical health care services contributes to the health status of the whole population and attention to the “big picture” contributes to the health of individuals. Winslow (1951) insisted that “No sound distinction can be drawn between ‘sanitation,’ ‘preventive medicine,’ ‘curative medicine,’ ‘health promotion,’ and ‘improvement of standards of living.’ All are parts of a comprehensive public health program in the modern sense.”

Figure 1. Public Health and the Health Care System Pyramid



Box 5. Clinical Care and Public Health: The TB Scenario

A woman falls ill with chronic cough, fever and weight loss in a rural village or urban shantytown. Others around her may have previously been ill with similar symptoms. She may delay seeking care due to other duties or lack of funds to pay for travel or consults. She may purchase medicines from a drug seller, visit a traditional healer or private physician; she may take drugs sporadically until her money runs out; symptoms remain and she becomes further incapacitated. Her family or neighbors may then bring her to a health center or hospital, where she sees a nurse auxiliary who may or may not refer her to a physician. The physician may charge her for an X-ray or treat her with general antibiotics and send her home or, alternatively, refer her for a free sputum smear examination if available.

She is found to have active infectious tuberculosis. The physician or nurse may tell her about TB, or due to stigma or lack of interest or time, they may only tell her that she needs to take more medicines. They may give her a month's worth to take home, or tell her to attend the health clinic every day even though it is two hours from her home, or worse yet tell her to buy the medicines elsewhere, if no drugs are in stock. She might get only two of the four medicines she needs. Family members who may also have become infected or ill might not be seen by the health provider. The health provider might not be able to follow-up to assess whether she tolerated the medicines, took them regularly, was cured, remained ill, or died. No functioning information system may be in place to register that a case was detected and treated. No supervisors may visit to provide training or feedback on performance.

The delays in seeking care, insufficiently skilled or salaried staff, lack of patient and community health education, poor supply chains, failure to report the TB case, lack of follow-up with the patient or her close contacts, and poor supervision in the use of the medicines all can increase the risk of failed treatment, chronic disease or death for the patient. This situation also contributes to the spread of infection in the community and to the potential emergence of drug-resistant organisms that pass from community to community and across borders.

To avoid this unfortunate scenario, public health practices can establish the norms and strategies for good disease prevention, treatment and control. They can enable health providers and community workers to apply these norms, access needed supplies, and educate patients and the public. Public health best practices enable the patient to seek care earlier or engage others to help her seek care. They improve access to appropriate low-cost diagnosis, treatment and referral if necessary. They create community-based or service-based directly observed treatment that meets the patient's needs, increases probability of cure and helps prevent transmission. Such an approach increases the credibility of providers, the satisfaction of patients, and the utilization of health services, and reduces the costs to society of illness.

Source: Diana Weil, HDNHE, focal person for TB in the HNP Network, World Bank.

The Interface of Public Health and Health Systems Development

Public health is a key part of every health care system. Public health functions cannot be adequately carried out unless the health system performs its crucial functions of providing services; investing in human and physical inputs; financing; and stewardship; and the health system cannot work without the proper conduct of public health functions. Whether or not it is always recognized, public health permeates the

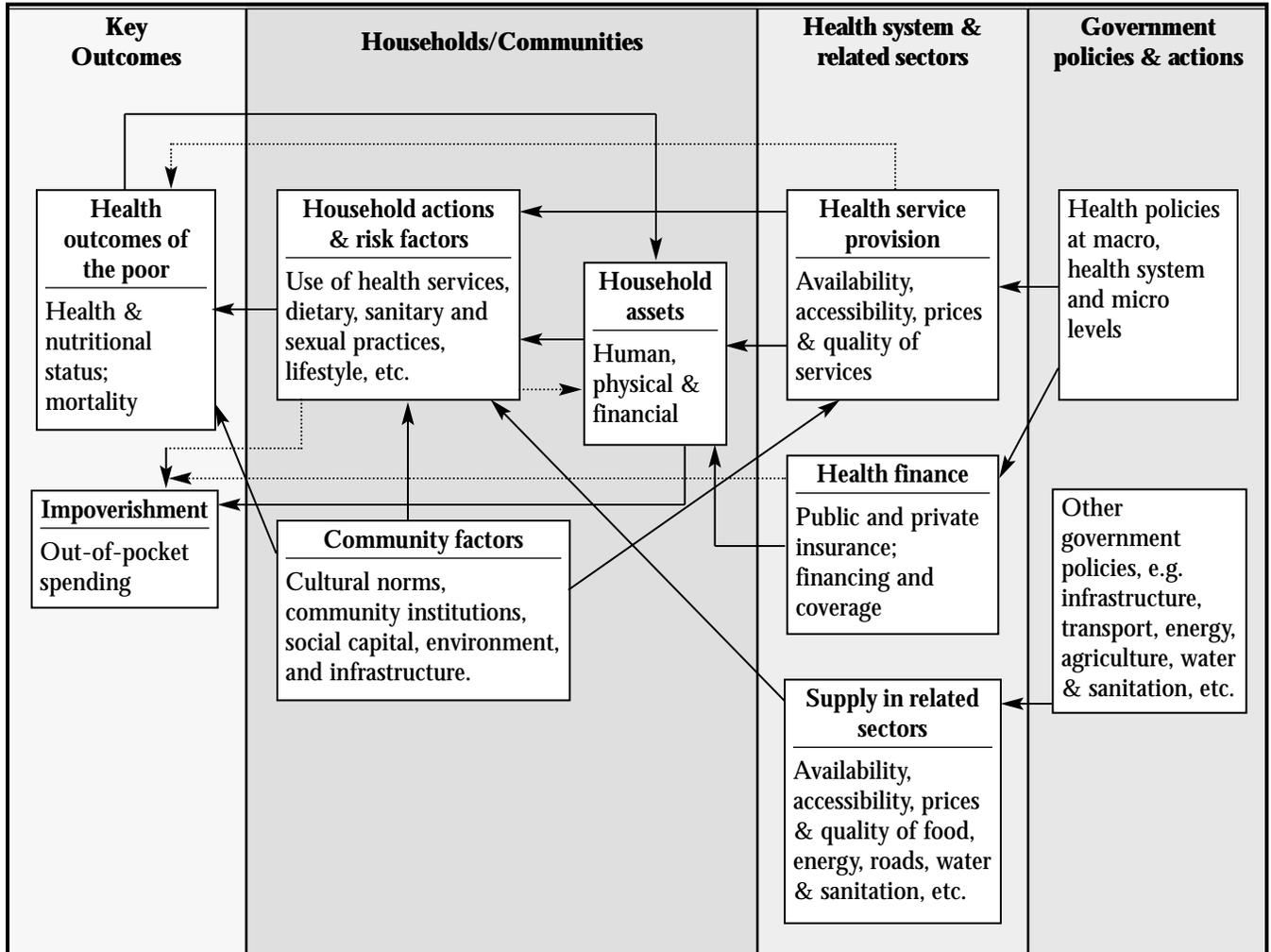
health system at every stage, from policy to outcomes, as shown in Figure 2.

Beyond the required physical inputs, the motivation of the staff and management of the organizations and institutions that comprise health systems have a profound influence on how well the public health system operates. The world's poor are often excluded from the benefits of public health interventions because the larger health system is dysfunctional.

The interface of public health and health systems development is also

reflected in the priority themes that the Health, Nutrition and Population thematic groups are working on: achieving progress towards the MDGs, improving development effectiveness and basic services for the poor. The HNP thematic groups (Public Health, Health Systems Development, Poverty, Nutrition, and Population and Reproductive Health) are all contributing to the common goal of improving health outcomes of the poor through knowledge management, training, improving quality and working with partners.

Figure 2. Determinants of Health-Sector Outcomes



Source: Claeson et al. (June 2001).

3. Why Should the Bank Invest More in Public Health?

One answer is that *the Bank is formally committed to achieving health, nutrition and population outcomes that require public health interventions*. Some of these outcomes are included among the Millennium Development Goals to which the Bank has subscribed (Annex 1). These goals can only be achieved through interventions to reduce maternal and child mortality; improve reproductive health; and achieve the targets for HIV/AIDS, malaria, TB and other communicable diseases, as well as interventions to make significant progress towards attainment of water and sanitation and nutritional goals (World Bank 2001c). Box 6 shows what is needed to achieve the child mortality reduction goal to which the Bank is committed. Intervention-specific tools and monitoring and evaluation indicators for other public health problems (including noncommunicable diseases characteristic of the epidemiological transition) are included in *Public Health at a*

Glance (World Bank 2001a) and in the health chapter of the *Poverty Reduction Strategy Sourcebook* (Claeson et al. 2001). Additional public health instruments and tools will be included in the Public Health Resource toolkit. These commitments and the tools to carry them out are consistent with the Bank Group's Strategic Framework (World Bank, 2001b).

A second answer comes from the economics of public health. Some of the functions described above, especially those of stewardship, cannot be left to the market but are inalienable responsibilities of the state. That makes them natural places for the Bank to invest, especially when institutions and capacities need to be built up. Other functions and particular activities within them are purely or partly public goods, with substantial externalities (including activities to control negative externalities, as with pollution or road safety). On

balance, there is at least as much justification for the Bank to invest in public health functions as there is for it to invest in clinical care activities, in which the Bank already is involved in numerous projects. Finally, the principal beneficiaries of greater public health progress will be poor people, especially in poor countries. Even when the required activities are largely private goods, public financing is essential if they are to reach the poor—or else public action is needed to add knowledge and change attitudes so that private markets can operate at prices the poor can afford. Insecticide-treated bednets to reduce malaria transmission are a prime example; condoms for protection from HIV/AIDS are another.

Clearly, the Bank does not have sufficient technical capacity in many public health areas and depends on the skills and knowledge of partner agencies, including those in client coun-

Box 6. Achieving Child Health and Nutrition Outcomes

Child mortality reduction is one of the Millennium Development Goals. Malnutrition reduction is a poverty target and is essential to achieving the child mortality reduction goal. Bank staff and partners have reviewed the key determinants and the main interventions.

The Poverty Reduction Strategy Framework. Achieving child health and nutrition outcomes requires a common framework for implementing targeted interventions, to reach the poor through health systems and community action and financing, with an emphasis on equitable distribution and an enabling policy environment.

Key Determinants. Key intermediate determinants are: use of health and nutrition services; water and sanitation practices; home care including infant feeding; the household environment; and maternal education, health and nutritional status. Household behaviors and risk factors are influenced by the quality and availability of services, community factors, household assets, health systems capacity, financing, and by the supply of services in related sectors. See Figure 2.

Evidence-Based Interventions. The main interventions are Integrated Management of Childhood Illness (which includes prevention and treatment of acute respiratory illness, malaria, diarrhea, malnutrition, measles and HIV/AIDS) and routine immunization. Other interventions at different stages of the lifecycle that contribute to child mortality reduction are nutrition-specific interventions, environmental health, injury prevention, reproductive health including family planning and safe deliveries, and maternal education.

Monitoring and Evaluation. Monitoring and evaluating health, nutrition and population outcomes requires investment in health situation monitoring and analysis, surveillance, disease prevention and control, and human resource development in public health.

Monitoring Indicators. Core indicators for child mortality reduction are coverage of measles immunization, ARI treatment, use of oral rehydration therapy and proportion of infants exclusively breastfed. In malarious areas, monitoring indicators should also include the proportion of children sleeping under insecticide-treated nets; and in HIV high-prevalence areas, they should include the coverage of low-cost antiretroviral treatment of HIV-infected pregnant women.

Sources: World Bank, 2001c.

tries. Nonetheless, *the Bank has a comparative advantage in public health* that derives from its client focus, country-specific knowledge, comprehensive perspective, potential to integrate across sectors, long-term commitment, convening powers and ability to work with the public and private sectors. The diversity of functions in public health is matched by the variety of instruments at the Bank's disposal, including not only conventional investment projects but also country assistance strategies (CASs), comprehensive development frameworks (CDFs) and poverty reduction strategy papers (PRSPs).

The Bank is increasingly engaged in multiple areas related to public health—the development of best practices in surveillance, immunization and other services; the design and costing of basic benefit packages; health promotion and lifestyle changes, pharmaceutical policy; tobacco taxation and alcoholic beverage policies; and investments throughout the lifecycle. With this range of engagements with clients and public and private partners, the Bank can credibly play an important catalytic and leveraging role—and increasingly help address the often neglected and critical public health functions.

This is not simply a question of additional funds to improve health, but of sustainable financing, and a unifying approach to disease control through health systems development and community-driven actions, providing a three tiered approach—macro policy, health systems development and targeted interventions. Sector-wide approaches provide a framework for a unifying approach to disease control, but the challenges are many, as evident in the Roll Back Malaria movement (Box 7).

Box 7. Roll Back Malaria: Aiming at Sustainable Impact through Sector-Wide Approaches

Sector-wide approaches endeavor to respond to many different concerns that have arisen in the context of development assistance for health. One of these concerns is the failure of “vertical” programs to have a sustainable impact upon public health outcomes. Several programs have all run into constraints when scaling up successful effort.

Disease-specific programs are constrained from achieving larger public health outcomes not only by limited commitment, improper technical standards, or lack of designated funds. Rather, children are not immunized, malaria cases are not effectively treated, TB is not diagnosed and diarrhea still leads to deaths from dehydration because vaccines, drugs, kerosene and oral rehydration salts are not ordered in time; vehicles to deliver drugs or transport staff and patients are not repaired; communications equipment required to contact the pharmaceutical stores or supervisor does not function; financing is not effectively disbursed; staff are not paid; or the health system is unable to retain staff in remote areas.

The Roll Back Malaria movement acknowledged at the outset the importance of health systems strengthening to achieving the goal of reduced deaths from malaria. Progress has been made in recognizing IMCI and reproductive health programs as inputs to malaria reduction (Uganda and Malawi), in bringing global attention to taxes on bednets (Senegal and Ghana) and in ensuring that malaria activities are incorporated into sector-wide programs and Poverty Reduction Strategy Papers (Uganda, Cameroon and Tanzania). Nevertheless, there is still pressure to provide countries with “RBM” financing and malaria-specific inputs, and less attention is paid to incorporating malaria within broader health development efforts. The challenge faced by Roll Back Malaria in maintaining a health systems orientation suggests how difficult it is to value actions that are not disease specific. Yet without attention to broader health systems, little sustainable impact is likely.

Source: Julie McLaughlin, AFTHI, Malaria Core Team in HNP Network, World Bank.

4. What Are the Bank's Strategic Options?

As the Bank undertakes to implement its corporate strategy for the coming three to five years, now is an ideal time to develop an overarching strategy in public health as well. A public health strategy for the Bank based on the Bank's comparative advantages, consistent with corporate priorities and developed in conjunction with or as part of a new HNP strategy could be a very useful tool for Bank staff. This section suggests strategic options—the *What To Do*—for enhanced public health efforts at both country and global levels. *How To Do It* is the subject of the Public Health Resource toolkit in preparation.

The Role of the Bank at Country Level: Strategic Options

- ***Prioritize Public Health Action in Policy Dialogue and Lending***
Priority in World Bank financing, knowledge management and client dialogue in health should be

given to achieving the Millennium Development Goals—improvements in maternal and infant mortality, reproductive health, HIV/AIDS, malnutrition, and water and sanitation, especially among poor populations (see Box 6 for an example). The poverty reduction strategy papers show how to link project inputs with health outcomes, including the Millennium Development Goals and their intermediate determinants. In client countries where the epidemiological and demographic transition is well underway, the public health actions to address the emerging burden of noncommunicable diseases and injury, and their determinants, also need to be prioritized in policy dialogue and lending.

- ***Assess Performance of Public Health Functions***
The Bank should fully utilize the

opportunities of client dialogue and knowledge management to engage the government and national health authorities in a self-assessment exercise. The object would be to evaluate how well the public health functions are being discharged, determine the capacity and infrastructure of the public health system for fulfilling those functions, and identify the strengths and weaknesses of the system.

Assessment of public health functions should focus initially on specific priority diseases and target populations relevant to the Millennium Development Goals. Public health functions are required to select and track key intermediate and outcome indicators to demonstrate that progress is being made in achieving the MDGs. The functions are needed to test the effect of policies and

programs, to assist in diagnosing how and why goals are not being achieved, and to adjust policies and programs as needed. Public health functions also provide important mechanisms for monitoring and evaluation of poverty reduction strategies. Those functions related to evaluating equity of access and ensuring quality of health services are important to better understand the needs of poor people and the impact on them of decisions about health financing and structural or functional changes in clinical health care services.

Assessment of performance in public health functions will identify gaps in knowledge, population coverage, resources, human capital and logistic capacity. Self-assessment can lead to better definition of institutional responsibilities including the roles of municipal authorities, nongovernmental organizations and the private sector. Thinking about functions helps identify the core competencies in public health for regional and local health authorities, in an environment of decentralization. Assessment of the performance of public health functions will also permit better quantification of the resources required to ensure an adequate public health system infrastructure—information critical to the government, decision makers, the Bank, donors and other international agencies.

- ***Incorporate Public Health Functions in PRSPs and CASs***
Sound diagnosis of poverty, iden-

tification of public actions that will have maximum impact on poverty reduction, and monitoring and evaluation are at the core of the poverty reduction strategy process. Since morbidity and mortality from common communicable diseases is a major problem among the poor, and access to health services is inequitably distributed to the disadvantage of the poor, the PRSPs should help make public health issues more visible and increase accountability for governments in their allocation of public expenditures to address these issues.

A country assistance strategy sets out the Bank's overall assistance program in a country and therefore has enormous potential to influence public health and provide a lever for introducing a public health perspective on the Bank's entire program in the country. One of the greatest challenges faced in CAS preparation is choosing priority sectors. The Bank can provide or mobilize technical support to countries undertaking the PRSP and CAS processes, assist them in making rational and sustainable choices, and then provide support to selected parts of the government program.

- ***Customize Solutions and Investments***
Field tests of self-assessments in Latin America and the Caribbean have shown that there is a wide range of performance among countries on the eleven PAHO/CDC/WHO "essential" public

health functions. Middle-income countries have more resources, infrastructure and human capital to devote to public health and therefore tend to perform better on some key functions than poor countries. But no predictions or generalizations about the patterns of strengths and weaknesses of public health performance can be based simply on income. Needs differ because each country has a unique combination of history, socio-economic characteristics, population composition, health problems, resources, human capital and environmental problems and characteristics.

The Global Role of the Bank: Strategic Options

- ***Disseminate Knowledge on Public Health and Public Health Functions***
The Bank should emphasize knowledge management and dissemination to address the Millennium Development Goals. The *Public Health at a Glance* series describes the state of the art in *what to do*. A lifecycle approach is recommended for the assessment of risks and for choosing among interventions for poor communities (Simon et al. 2001). The Public Health Resource toolkit will provide a similar set of knowledge management products related to *how to* implement the best buys in different country contexts under Bank operational constraints. This means focusing on knowledge management and dissemi-

nation related to the five categories of public health functions.

- ***Conduct Research and Analysis Related to Public Health Functions***

More research and analysis is needed to determine the best buys for Bank investment in public health functions. To understand the direct and indirect relations between the specific functions and specific outcomes requires further analysis of the causal web linking health outcomes with multiple determinants. What is the relative importance of non-health determinants versus direct health determinants in achieving the Millennium Development Goals? What is the evidence that investing in public health and public health functions actually improves outcomes for poor people? How should one set priorities in public health given the different economic, epidemiological and demographic contexts and transitions? These are all issues for research.

- ***Selectively Engage in Global Health Initiatives***

In 1998, the HNP Sector Board decided that collaboration with partners could be optimized by a focus on a few major HNP issues with large externalities, through multi-country initiatives, and with clarification of the comparative advantage of the Bank and its partners. The priorities selected were based on the Bank's ability to make a significant difference, the

timing and the expectations from clients and partners at the time. They were:

- a global noncommunicable disease problem (tobacco);
- emerging and re-emerging communicable diseases (malaria, TB and HIV/AIDS); and
- the unfinished agenda of maternal and child health and nutrition (selected reproductive health, IMCI, immunization and nutrition interventions).

Since then, the Bank has increased its engagement in global initiatives and is exploring with partners innovative financing mechanisms and lending instruments to achieve specific health outcomes (Box 8). As partners expect increasing support from the Bank for new initiatives, it is important to revisit the criteria for selecting priority programs and topics and evaluate progress in those areas that have received priority status globally. Possible new criteria for increased selectivity in global initiatives are:

- the relevance of the initiative for achieving the major

Box 8. Partners in Public Health

Public health partnerships and initiatives can contribute to strengthening public health functions, e.g., investments in immunization can help build surveillance capacity, a functioning cold chain and other public health infrastructure. Moreover, an increased emphasis on public health functions will enable countries to assess, prioritize and take advantage of the opportunities that these initiatives offer to achieve sustainable improvements in health.

Strong partnerships with client governments, beneficiaries, nongovernmental organizations, the private sector, bilateral donors, foundations and other agencies have become critical to the Bank's work in public health. The Bank relies on the United Nations (including WHO, UNICEF, UNAIDS and UNFPA), other agencies such as the U.S. Centers for Disease Control and Prevention and nongovernmental organizations, in knowledge management, client support on technical issues and working with communities.

The Global Alliance for Vaccines and Immunization (GAVI), Safe Injection Global Network (SIGN), Roll Back Malaria (RBM) and Stop TB are a few of the technical partnerships of the last five years. The Bank work with partners on public health initiatives and programs ranging from the Safe Motherhood Initiative, the Global Alliance for Improved Nutrition (GAIN), Integrated Management of Childhood Illness (IMCI), to curbing the tobacco epidemic and mental health. Through concerted efforts, such as the Multi-country AIDS Project (MAP) in Africa and the Caribbean, the Bank and partners are scaling up efforts to combat AIDS. Through these partnerships, the Bank supports the development of new vaccines and immunization programs, the improvement of maternal and child health and nutrition, the control of communicable diseases such as malaria, tuberculosis and HIV/AIDS and emerging noncommunicable diseases and their risk factors.

HNP goals. Will it help in making measurable progress towards the Millennium Development Goals in client countries?

- the role of the initiative within Poverty Reduction Strategies. Will it help build capacity for poverty reduction in client countries?

- the utilization and enhanced application of Bank lending instruments. Will it improve the Bank's performance?

5. Conclusion: Public Health and the World Bank

Public health is a complex field touching on deep personal and professional issues and values. It has boundaries that do not lend themselves to clear definition, in economic or health terms. Yet its concern for societal improvements in health outcomes is central to the agenda of the Bank and to any concern for increasing welfare in the developing countries, especially among poor people.

At the beginning of the new millennium, public health is a rapidly evolving field. New issues are emerging, such as the health aspects of globalization, public health in post-conflict societies, global public health goods and new and re-emerging diseases. In light of the central character of health in the agreed international development goals, a public health perspective needs to infuse the entire work of the Bank. *The HNP staff must take the lead to facilitate and monitor the application and strengthening of this perspec-*

tive at the country level. In some cases, the Bank may finance specific aspects of global initiatives in individual developing countries (e.g., AIDS vaccine trials). However, the work on these initiatives in individual developing countries must be determined by the particular country's needs and not solely by global actions.

The Bank is already engaged in many dimensions of public health, financially and otherwise, within countries. The Bank should now broaden and deepen that engagement within and across the five categories of public health functions. It should do so in accordance with its global and HNP missions, its values, its multi-sectoral character and its institutional areas of comparative advantage. To be fully effective, Bank engagement in public health at the country level requires the following: multiple disciplines and skills working together, especially public health specialists and economists; organizational

commitment, through vice presidential units (VPUs), country teams and sector boards; and a work program that reflects these commitments and that involves a wide range of internal and client country actors, including ministries of health, other sectoral departments, ministries of finance and planning, and the civil society.

There is a wealth of tools, expertise and commitment within the Bank and among its partners on public health both in the HNP sector and in other sectors, on which Bank staff can draw to become more effective in public health at the country level. The forthcoming web-based Public Health Resource toolkit will address more specifically the challenge of cooperation on public health issues and outcomes across sectors and will provide practical, operationally oriented guidance in the form of ideas, tools and shared experience on key public health functions and services and their financing.

ANNEX 1. The Millennium Development Goals for Health, Nutrition and Population

Millennium Development Goals (MDGs) for HNP

<i>Goals and Targets</i>	<i>Indicators</i>
<i>Goal 1: Eradicate extreme poverty and hunger</i>	
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	Proportion of population below \$1 per day Poverty gap ratio [incidence x depth of poverty] Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	Prevalence of underweight children (under-five years of age) Proportion of population below minimum level of dietary energy consumption
<i>Goal 2: Achieve universal primary education</i>	
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	Net enrolment ratio in primary education Proportion of pupils starting grade 1 who reach grade 5 Literacy rate of 15-24 year olds
<i>Goal 4: Reduce child mortality</i>	
Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Under-five mortality rate Infant mortality rate Proportion of 1 year old children immunised against measles
<i>Goal 5: Improve maternal health</i>	
Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	Maternal mortality ratio Proportion of births attended by skilled health personnel
<i>Goal 6: Combat HIV/AIDS, malaria and other diseases</i>	
Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	HIV prevalence among 15-24 year old pregnant women Contraceptive prevalence rate Number of children orphaned by HIV/AIDS
Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Prevalence and death rates associated with malaria Proportion of population in malaria risk areas using effective malaria prevention and treatment measures Prevalence and death rates associated with tuberculosis Proportion of TB cases detected and cured under DOTS (Directly Observed Treatment Short Course)

Source: World Bank (2001c) provides information on useful intermediate determinants. Available at the web : www.worldbank.org/hnmpmdg

ANNEX 2: “Essential” Public Health Functions Identified by PAHO/CDC/WHO *

1. Health Situation Monitoring and Analysis

For example,

- Up-to-date evaluation of the country's health situation and trends and their determinants, with special emphasis on identifying inequities in risks, threats and access to services;
- Identification of the population's health needs, including assessment of health risks and the demand for health services;
- Management of the vital statistics and the specific situation of groups of special interest or at greater risk;
- Generation of useful information to evaluate the performance of the health services;
- Identification of extra-sectoral resources to support health promotion and improvements in the quality of life;
- Development of technology, experience and methodologies for the management, interpretation and communication of information to those responsible for public health (including actors from outside the sector, health care providers and citizens); and
- Creation and development of agencies to evaluate the quality of the data collected and analyze it correctly.

2. Surveillance, Research and Control of Risks and Damages in Public Health

For example,

- The capacity to conduct research and surveillance on epidemic outbreaks and patterns of communicable and non-communicable diseases, accidents and exposure to toxic substances or environmental agents harmful to health;
- A public health services infrastructure designed to conduct population screenings, investigate cases and perform epidemiological research in general;
- Public health laboratories with the capacity to conduct rapid screening and process a high volume of tests needed to identify and control emerging threats to health;
- The development of active programs for epidemiological surveillance and control of infectious diseases;
- The capacity to develop links with international networks that permit better management of relevant health problems; and
- Preparedness of the NHA to mount a rapid response to control health problems or specific risks.

3. Health Promotion

For example,

- Community health promotion activities and development of programs to reduce risks and threats to health with active citizen participation;
- Strengthening of the inter-sectoral approach to make promotion activities more effective, especially those designed for the formal education of young people and children;
- Empowerment of citizens to change their own lifestyles and become actively involved in changing community habits and demand that the responsible authorities improve environmental conditions to facilitate the development of a “culture of health.”;
- The implementation of activities aimed at making citizens aware of their rights in health; and
- The active participation of health services personnel in the development of educational programs in schools, churches, workplaces and any other organizational setting where information can be conveyed.

4. Social Participation and Empowerment of Citizens in Health

For example,

- Facilitation of participation by the organized community in programs for the prevention, diagnosis, treatment and rehabilitation of health;
- Strengthening of inter-sectoral partnerships with civil society that make it possible to utilize all the human capital and material resources available to improve the health status of the population and promote environments that foster healthy lives;
- Support through technology and experience for developing networks and partnerships with organized society for health promotion;
- Identification of community resources that collaborate in promotional activities and in improving the quality of life, enhancing their power and capacity to influence the decisions that affect their health and their access to adequate public health services; and
- Reporting and lobbying government authorities concerning health priorities, particularly those that depend on improvements in other aspects of the standard of living.

5. Development of Policy, Planning and Managerial Capacity to Support Efforts in Public Health and the Steering Role of the National Health Authority

For example,

- The development of political decisions in public health through a participatory process at all levels that is consistent with the political and economic context in which the decisions develop;
- Strategic planning on a national scale and support for planning at the subnational levels;
- Definition and refinement of public health objectives, which should be measurable, as part of the strategies for continuous quality improvement;
- Evaluation of the health care system to develop a national policy that protects health services delivery with a public health approach;
- Development of codes, regulations and laws to guide public health practice;
- Definition of national public health objectives to support the steering role of the Ministry of Health or its equivalent, in terms of setting objectives and priorities for the health system as a whole;
- Management of public health in terms of the process of constructing, implementing and evaluating organized initiatives to address public health problems;
- Development of competencies in evidence-based decision-making that incorporate resource management, leadership capacity and effective communication; and
- Quality performance of the public health system resulting from successful management that can be demonstrated to the providers and users of such services.

6. Public Health Regulation and Enforcement

For example,

- Development and enforcement of sanitary codes and/or standards to control of health risks related to the quality of the environment; accreditation and quality control of medical services; certification of the quality of new drugs and biologicals for medical use, equipment, or other technologies; and any other activity that involves compliance with laws and regulations geared to protecting public health;
- The creation of new laws and regulations aimed at improving health and promoting healthy environments;
- Consumer protection as it relates to the health services; and
- Carrying out all these regulatory activities properly, consistently, fully and in a timely manner.

7. Evaluation and Promotion of Equitable Access to Necessary Health Services

For example,

- The promotion of equitable access to health care. This includes the evaluation and promotion of effective access by all citizens to the health services they need;
- The evaluation and promotion of access to the necessary health services through public and/or private providers, adopting a multisectoral approach that makes it possible to work with other agencies and institutions to resolve inequities in the utilization of services;
- The execution of activities aimed at overcoming barriers in access to public health interventions;
- Facilitating the linkage of vulnerable groups to the health services (without including the financing for this care) and to health education, health promotion and disease prevention services; and
- Close collaboration with governmental and nongovernmental agencies to promote equitable access to the necessary health services.

8. Human Resources Development and Training in Public Health

For example,

- The education, training and evaluation of the public health workforce to identify the need for public health services and health care, efficiently address priority public health problems and adequately evaluate public health actions;
- The definition of licensure requirements for health professionals in general and the adoption of programs for continuous quality improvement in the public health services;
- The formation of active partnerships with programs for professional development to ensure that all students have relevant public health experience and receive continuing education in management and leadership development in public health; and
- Capacity-building for interdisciplinary work in public health.

9. Ensuring the Quality of Personal and Population-Based Health Services

For example,

- Promoting permanent systems for quality assurance and the development of a system for monitoring the results of evaluations made through those systems;
- Facilitating the development of the basic standards required for a quality assurance system and supervising the compliance of service providers with this obligation;
- A health technology assessment system that supports the decision-making process for the entire health system;
- Use of the scientific method to evaluate health interventions of varying degrees of complexity; and
- Use of this system to improve the quality of the direct delivery of health services.

10. Research, Development and Implementation of Innovative Public Health Solutions

For example,

- The continuum of innovation, which ranges from the efforts of applied research to promote changes in public health practice to formal scientific research.;
- Development of the health authority's own research capacity at its different levels; and
- Establishment of partnerships with research centers and academic institutions to conduct timely studies that support the decision-making of the NHA at all its levels and in as broad a sphere of action as possible.

11. Reducing the Impact of Emergencies and Disasters on Health

For example,

- The planning and execution of public health activities in prevention, mitigation, preparedness, response and early rehabilitation;
- A multiple focus that addresses the threats and etiology of any and all possible emergencies or disasters that can affect a country; and
- Participation of the entire health system and the broadest possible intersectoral cooperation to reduce the impact of emergencies and disasters on health.

**Source: Adapted from Pan American Health Organization (PAHO). May 2000. "National Level Instrument for Measuring Essential Public Health Functions." Public Health in the Americas. Washington DC: PAHO/U.S. Centers for Disease Control and Prevention/Centro Latino Americano de Investigaciones en Sistemas de Salud.*

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