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Strategies for Developing
Public Health Competencies
in the Health Workforce:
Based on Current Policies
and Technical Evidence

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TABLE OF CONTENTS

Executive Summary.....	1
Introduction	3
A Development Strategy	5
Step One: Characterize the Public Health Workforce	5
A. Professional Background	6
B. Personal Information.....	6
Step Two: Create a Process for Collecting and Managing Data	7
Step Three: Identify Necessary Competencies	8
Building Competencies in Public Health.....	9
Education and Training.....	9
A. Scaling up the Current Workforce.....	9
B. Preparing the Health Human Resources of the Future.....	10
Labor Planning.....	10
Additional Development Strategies for Strengthening and Sustaining the Public Health Workforce	13
Allocation and Distribution	13
Recruitment and Retention.....	14
Advocacy.....	16
Planning and Policy Making.....	17
Quality, Performance, and Equity: Essential in the Development of Human Resources in Public Health	19
Quality and Performance in Public Health Workforce.....	19
Equity: An Intrinsic Goal in Public Health.....	20
Conclusion.....	21

EXECUTIVE SUMMARY

As part of the commitment of the countries of the Americas to strengthen their human resources in health over the next ten years, and in line with the Pan American Health Organization's (PAHO/WHO's) support of that effort in the context of attaining the Millennium Development Goals, this document relies on existing knowledge and expertise to recommend strategies to develop human resources and training in public health for Latin American and the Caribbean (the Region).

Public Health activities are not only the responsibility of the public health officers specialists, but they also fall under the responsibilities of primary health care workers, allied health care workers, and the secondary workforce (those human resources from fields other than health) who are not specifically charged with public health roles. To coordinate this variety of actors and to strengthen the capacity of countries to provide the needed public health services to their populations, a development strategy must be holistic, addressing the many complex and related issues that challenge the strength and sustainability of the Region's health workforce.

The first critical step in developing human resources in public health is to identify the institutions that provide public health services – to know how many there are and where they are located, and to understand the makeup of their workforces, the type of public health activities that are carried out, and the amount of time spent on those activities. This information, combined with proxy assessments of performance quality and perceived needs, will allow a characterization of the workforce and will reveal the competencies that are needed and the gaps that should be filled.

Training the current workforce and educating the future workforce will equip the human resources with the skills/abilities, knowledge and attitudes necessary to carry out public health activities that meet the needs of the population. To create effective curricula and attain the right skills mix within the public health institutions, health authorities must work with the academic and labor sector. In addition, there must be independent regulatory bodies that accredit the academic institutions, certify the education programs, and monitor the performance of the public health institutions to ensure that quality education is provided and service standards are maintained.

Training and educating are part of a combination of development ingredients that build, stabilize and sustain human resources in public health. The labor structure must also be adjusted to accommodate the workforce and equip the public health institutions with the right competency mix in their workforce teams. Other challenges that must be addressed in Latin America and the Caribbean are allocation and distribution, retention and recruitment, advocacy for fiscal space and technical assistance to support health human resources, and strategic planning and policy making that will enable continued development.

Development strategies in public health human resources must emphasize quality and must always aim toward equity. The goal is to develop a well-trained, well-compensated workforce that is committed to delivering quality public health services to all of the population and that can respond to epidemiological and demographic changes as well as unexpected health crises.

INTRODUCTION

The Pan American Health Organization / World Health Organization (PAHO/WHO), through the sponsorship of the United States Agency for International Development (USAID), has compiled and reviewed a collection of pertinent literature on the “public health workforce” and has assembled experts in the field, in several meetings throughout 2005, to explore the current knowledge and analyze the recent experiences to develop a strategy for strengthening the human resources in public health.

As recent decades have seen a progressive decline in the preparedness, effectiveness, and accessibility of health human resources, as well as a neglect of this vital resource in health, the countries of the Americas are now experiencing a crisis in their health systems, due to which the health systems are not able to deliver the quality services that are required to meet the health needs of the Region’s populations. Only with a well-prepared, well-equipped, motivated workforce, will countries be able to achieve the Millennium Development Goals by 2015. Therefore, the efforts and initiatives over the next decade must focus on this essential resource and allocate financial resources and political will to the development and strengthening thereof. This focus is particularly important in the area of public health in Latin America and the Caribbean, because in this Region, *Human Resources and Research* are the two lowest performing functions out of the eleven essential public health functions,¹ which are “...the structural conditions and aspects of institutional development that permit better performance in terms of public health practice.”²

As part of the commitment of the countries of the Americas to strengthen their human resources in health over the next ten years, and in line with PAHO/WHO’s support of that effort in the context of attaining the Millennium Development Goals, this effort aims to assess and systematize the existing knowledge required to strengthen the Essential Public Health Function #8, which is defined as the ‘Development of Human Resources and training in Public Health,’ for Latin American and the Caribbean.

Combining the most recent literature with the conclusions and recommendations from the 2005 meetings of experts and stakeholders from the countries of the Americas (Meetings were held throughout 2005 and the first part of 2006 in San José, Costa Rica, Vera Cruz, Mexico, Lima, Peru, Ottawa, Ontario and Toronto, Ontario), PAHO has produced a general assessment of the public health workforce in the Americas and recommends an initial strategy for strengthening the health human resources in the countries of the Americas so that the health institutions better perform the eleven public health functions laid out in the PAHO’s 2002 report on public health in the Americas.³ As part of the commitment of the countries of the Americas to strengthen their human resources in health over the next ten years, and in line with PAHO/WHO’s support of that effort in the context of attaining the Millennium Development Goals, the recommended strategy is targeted for Latin America countries and the Caribbean; and subsequently, as this project develops further, may be specifically applied to target groups within the larger populations of the Region (i.e.: gender-specific populations, indigenous groups, and population groups which are affected by specific diseases will be assessed to discern if the public health resources recommendations apply in the same way within these population subsets).

The arrival of new diseases such as SARS (Severe Acute Respiratory Syndrome), pandemics such as HIV/AIDS, social behaviors that threaten the health of larger proportions of a country’s populations, and the threat of bio-terrorism all have created a heightened urgency for the strengthening of the public health infrastructure and specifically the public health capacities of the global health workforce. The demands of shifting epidemiological challenges coupled with rapidly fluctuating population demographics have made it

¹ In its largest international assessment effort to date, CDC collaborated with the Pan American Health Organization to help 2,000 health workers in 41 countries in Latin America and the Caribbean carry out self-assessments of their public health systems; 2001.

² Pan American Health Organization, Pan American Sanitary Bureau, Regional Office of the World Health Organization; Public Health in the Americas: Conceptual Renewal, Performance Assessment, and Bases for Action; Scientific and Technical Publication No. 589; 2002.

³ Pan American Health Organization; Public Health in the Americas: Conceptual Renewal, Performance Assessment, and Bases for Action; 2002.

apparent that countries need to scale up the public health capacities of their health human resources in order to better protect their populations and to respond more rapidly and effectively to crises.

A DEVELOPMENT STRATEGY

STEP ONE: CHARACTERIZE THE PUBLIC HEALTH WORKFORCE

The first step in effectively developing and improving the health workforce is to define it. Ergo, the first of the five indicators used in PAHO's Public Health in the Americas to denote the level of development of EPHF #8 is "the description of the public health workforce."⁴

Defining the public health workforce poses a unique challenge because the functions that must be performed to effectively provide public health services can no longer be carried out solely by that part of the health workforce that is specifically charged with public health responsibilities or those health workers holding job positions in public health (public health officers, etc). Rather, the functions of public health involve much of the wider health workforce, and to carry out the activities involved in public health adequately, health workers must be engaged in these activities along with their primary position responsibilities, particularly those health workers who deliver front line services at the primary health care level. In addition, the workers that carry out public health activities extend beyond the sector of health to include the "secondary workforce."⁵ This secondary workforce falls under the responsibility of government ministries other than the health ministry (such as agriculture, education, and transportation) and also involves volunteer organizations, and non-government organizations.

Over recent years, many countries within and outside of the Americas Region, in an effort to strengthen their public health infrastructures, and consequently aiming to develop their human resources for public health, have begun their development planning by attempting to define their public health 'workforce.' Countries have used different approaches to overcome the challenge of defining this complex workforce in a way that would include institutions and entities, as well as individuals, participating in activities involved in providing the essential public health functions, whether or not the job descriptions or responsibilities were specifically defined as such.

The United States proposed an enumeration strategy by cross-referencing public health functions with job titles and employment organizations. "The Public Health Workforce: An Agenda for the 21st Century,"⁶ describes how the U.S. Department of Health and Human Services (HHS) worked with the Centers for Disease Control (CDC) to define specific functions of the public health workforce and then worked with the U.S. Bureau of Labor Statistics to characterize the various job descriptions that should be included in the public health workforce. Australia⁷ and the United Kingdom⁸ attempted to categorize their workforce not by functions, but by activities (what an individual actually does in the course of his/her regular work). The Australian and United Kingdom enumeration methodologies re-enforced the idea that the human resources that contribute to the public health functions are not a separate workforce, but include along with the public health specialists, primary health care workers, and the wider health human resources and workers from other fields.

Before any development strategy can be planned or implemented, the characteristics of the workforce must be understood. Planners and policy-makers must have an idea, as accurate as possible, regarding how many people, and in what institutions, are carrying out the activities involved in providing public health

⁴ Ibid.

⁵ Rosenberg, M.W. and Lovell, S.; "A Methodology for Projects to Characterize the Public Health Workforce in Costa Rica, Jamaica, and Mexico;" Queen's University Department of Geography; Kingston, Ontario, Canada, 2006.

⁶ U.S. Department of Health and Human Services, Public Health Service; "The Public Health Workforce: An Agenda for the 21st Century, A Report of the Public Health Functions Project;" 1997.

⁷ NSW Department of Health; "NSW Consultation on the Development of the National Public Health Workforce for the National Public Health Partnership; State Health Publication, No. (PHD) 000046, ISBN 0734731523.

⁸ United Kingdom Department of Health; "The Report of the Chief Medical Officer's Project to Strengthen the Public Health Function; (2001a).

services, or those services that are part of providing the eleven essential public health functions. Not only is it necessary to count numbers—the number of workers, the institutions in which they work, and the geographical locations of these institutions—but it is also necessary to collect additional information that describes the workforce.

To take this first step of identifying and characterizing the public health workers, Rosenberg and Lovell, working with PAHO, developed an enumeration methodology for the Americas to implement as a pilot project in three countries of the Region—Mexico, Costa Rica, and Jamaica.⁹ This methodology uses primary and secondary information, gathered through direct interviews and focus groups, to identify both the formal and informal workforce that participate in activities involved in the eleven essential public health functions at the national, state/province, local (both urban and rural) levels.

The methodology will be used to identify which institutions and which individuals within those institutions carry out public health activities and to what extent (what percentage of time is dedicated to public health, what activities are accomplished, and which functions are performed). In addition, this methodology adds an additional step of collecting personal information on the individual workers identified in order to be able to describe the workforce as well as count it. Information requested includes:

A. Professional Background

- *Number of years working in current position:* This will give evidence to professional development, career paths, attrition trends, migrations.
- *Work Experience and Location prior to this position:* Will provide information in the areas mentioned above.
- *Other Work Activities (other than those activities related to public health):* It is helpful to see what activities are often associated together when locating the public health workforce and defining what activities are pursued—or could be undertaken in the future.
- *Education and Training:* This information will give a picture of the level of training of the overall workforce and what kind of training and education applies to what titles, job descriptions and actual job responsibilities and day-to-day activities.

B. Personal Information

Age: Knowing age will help to identify how many workers are close to retirement.

Family Situation (marital status and children): If the worker has family or small children, this information reveals the economic demands and family demands that may or may not contribute to career choices and time away from work.

Gender: There are gender-specific concerns when planning and developing the workforce. First, females make up a large percentage of the health workforce in the Americas (women make up 30% of the doctors, 90% of nurses, and 65% of other health worker groups),¹⁰ and so often bring needs to the workplace that are most often related to females—pregnancy, demands of small children, needs of other family members—such as the elderly or sick relatives.

Ethnic Identity: This information will be important to understand the demographic description of the workforce and to see how the demographic makeup of the health providers does or does not reflect the community they serve. Information on ethnic identity also reveals the percentages of ethnic and cultural groups that are active in the workforce and how that ratio compares with the population as a whole.

⁹ Rosenberg, M.W. and Lovell, S.; “A Methodology for Projects to Characterize the Public Health Workforce in Costa Rica, Jamaica, and Mexico;” Queen’s University Department of Geography; Kingston, Ontario, Canada, 2006.

¹⁰ World Health Organization; Working Together for Health: World Health Report 2006.

The aim of this questionnaire is two-fold. First, the information gathered in each of the three countries will show what institutions are providing public health services, how many employees are engaged in activities related to these services, and where these institutions are located.

In addition to providing a count and geographic mapping of public health services being provided and public health activities taking place, the questionnaire will provide further information on the demographics, education/training, work history, and other work activities of the health human resources—thus painting a picture of the institutional public health workforce.

Actors in the field of public health in the Americas have recommended that a performance assessment be implemented at the same time as this characterization methodology is applied.

The numbers of workers and types of work carried out is important if the services performed meet quality standards. If populations do not receive quality health care, then improving the number of workers or altering the percentage of time dedicated to public health activities will make little difference in meeting the health needs of the communities. Development strategies need to improve service delivery, satisfaction of workers, and quality of work while addressing gaps in numbers and activities mix.

During the characterization process in the three pilot countries, it should be useful to implement a simultaneous effort to gather proxy data on quality of performance. Of course, the results of this assessment will not be exact or precise, but it will reveal the perceived level of performance and reveal gaps where interventions may be needed to improve quality of services. To gather this information, it is recommended that a series of focus groups might be held in all locations where workforce characterization data is collected. The focus groups should be held at three levels—with managers, with workers and with users—to discuss questions about the performance of the health workers and the quality of services provided.

STEP TWO: CREATE A PROCESS FOR COLLECTING AND MANAGING DATA

The data collected in the characterization methodology is valuable not only to yield a description of the current workforce, but also to establish a baseline from which to watch changes and to observe trends. In planning strategies for the future, calculations and assumptions are based on the past, so it is necessary to organize the information gathered into relative frameworks and to continue adding to the information over time. Therefore, at the same time that the enumeration and characterization pilot is implemented, a process needs to be established (or reinforced if one already exists) to store and evaluate the data, and to update the information continuously. The consistent collection of data and analysis will provide evidence of the changes and improvements that result from interventions.

One of the first key elements needed in a human resource development plan – after enumerating the current workforce – is an information management system. This system does not have to be digital or technologically based. Technical capability to manage the information through computer databases certainly makes applications, analysis, and comparisons much easier; however, information may be gathered manually and sorted through grids or spreadsheets. In the pilot countries where this methodology is to be tested, there are capabilities to store the information in electronic database systems.

A database on the human resources and institutions that perform public health functions allows planners and strategists to track changes in the workforce over time, identify trends (how the numbers of workers and tasks performed change over time), to prepare for attrition, to respond to shortages, to take action when performance declines, and most importantly to sustain a body of data on which to base human resources plans and policies.

STEP THREE: IDENTIFY NECESSARY COMPETENCIES

Upon identifying the institutions performing public health functions and having gathered data and systematized information on the individuals engaged in public health activities, the next steps in the development process determine what competencies (knowledge, skills/abilities, and attitudes) are needed to carry out the activities involved in performing the public health functions and to fill the institutional gaps in these competencies.

After many years of research and numerous attempts to define what activities are involved in providing for public health, the global community has come to some consensus in embracing the functions that public health must provide.¹¹

It is suggested that there are certain core competencies that are vital for the human resources to be able to effectively perform the public health functions. Several lists of “**core competencies**” have been compiled, and all of them are similar. The Council on Linkages between Academia and Public Health Practice completed 10 years of research, numerous consultations with experts and academicians in the public health arena, and reviews by over 1,000 public health workers to compile a list of core competencies for developing the public health workforce in the United States. “The competencies are divided into the following eight domains: Analytic Assessment Skills, Basic Public Health Sciences Skills, Cultural Competency Skills, Communication Skills, Community Dimensions of Practice Skills, Financial Planning and Management Skills, Leadership and Systems Thinking Skills, Policy Development/Program Planning Skills. Skills and knowledge levels are listed first within each domain, followed by important attitudes relevant to the practice of public health. While attitudes may be more difficult to measure, they can be part of what is taught and should be included in curriculum and content development efforts.”¹²

Information gained from the characterization and the quality assessment proxies carried out in the initial enumeration activity will reveal the competencies that are most in demand and the specific competency gaps and needs for improvement. The needs and priorities of each country and each community will affect which activities are most important and most prevalent in meeting the unique needs of the different populations. Therefore, each country (as well as the diverse regions within a country) will have variations in the organizational competency needs of its public health infrastructure and the gaps that are most urgent to address.

Upon defining the organizational competencies needed within the institutions or agencies, it follows that the individuals within the organization must possess the corresponding individual competencies.

¹¹ Pan American Health Organization; Public Health in the Americas: Conceptual Renewal, Performance Assessment, and Bases for Action; 2002.

¹² Council on Linkages Between Academia and Public Health Practice; “Core Competencies for Public Health Professionals: Competencies Feedback Project;” Funded by the Health Resources and Services Administration (HRSA); United States Department for Health and Human Services; 2001.

BUILDING COMPETENCIES IN PUBLIC HEALTH

Moving from competency identification to human resources development presents a challenge. The first three steps of the development process are essential to establishing a foundation for moving forward. From this starting point, the next steps may be coordinated in different combinations to accomplish the necessary training of the workforce and to fill the human resources gaps within the institutions.

Incorporating the needed competencies into the workforce is a two-part process. One piece of this process is the education and training piece, and the other is the professional / labor piece.

EDUCATION AND TRAINING

The education and training of the current workforce to increase or improve its competencies in public health must be provided in order to address the immediate gaps. First, in-service training and continuing education courses should be developed for the public health workers who need additional skills or may need to update the competencies they have in order to raise the quality of their services. In addition, courses and training programs should be created for the health workers who are not specifically public health workers but are involved in public health activities, so that their competencies and engagement in public health may also be augmented. Third, public health training seminars or in-service training courses may be specifically tailored for those workers in the secondary workforce who contribute to public health functions.

At the same time, the academic programs in health and related fields must be strengthened in the educational institutions so they adequately prepare the incoming workforce with the knowledge, skills/abilities and attitudes they will need to perform public health functions. Part of the curricula should instruct the students on the importance of public health as part of their practice and part of their value system as health workers delivering equitable care to all populations.

A. Scaling up the Current Workforce

A variety of educational offers and tools of delivery should be combined to train the health workers in the field and target the gap areas. Courses may be offered at the place of work through trainers and educators, in off-site seminars/courses that require attendance over a period of time, or through on-line (virtual) courses that may be completed at the student's individual pace.

Specialized courses should be offered to develop specific skill sets where gaps appear or perceived needs are not being met (such as leadership, management, or communication). Seminars or continuing education courses are also a means of maintaining the skill level of the workforce so knowledge and abilities are up-to-date. Workers may be motivated to pursue these continuing education courses either by requiring seminar certificates or course points as part of the job obligations, or by rewarding seminar attendance with non-monetary incentives.

In-service training for entire staff is most effective when there are common competency gaps or update needs that are shared throughout the staff. An example of an in-service training that may be useful to all staff levels in a clinical setting, such as a primary health care clinic, is cultural sensitivity training. In-service training may also be targeted to one specific group, such as a managerial skills training targeted for health human resources managers within the Ministry of Health.

Costa Rica has focused its human resources development efforts in scaling up the public health competencies of its primary health care teams. As part of this effort, Costa Rica provides health management training to primary health care workers who are already working in the field, building skills in tracking, managing, planning, and monitoring. Courses may also offer a combination of these offerings. The PAHO

course on management in public health, an offering of the Virtual Campus for Public Health, provides on-line training to the managers in public health of the Ministry of Health of Peru.

B. Preparing the Health Human Resources of the Future

By scaling up the public health competencies of the current workforce, both of the public health workers specifically the primary health care and front line health workforce that are not identified as public health specialists, the immediate gaps in service will be mitigated and the capacity of institutions to deliver quality public health services will be improved.

At the same time, it is necessary to adjust the curricula in the academic institutions so that future generations of health workers will also be prepared with the competencies necessary to meet the public health needs of the populations.

Public Health Curricula should be needs-based and offered at three different levels: graduate degree programs in public health for public health specialists, policy makers, and managers; undergraduate degree programs for public health career candidates who will be trained to perform specific public health activities that may not need graduate level training; and courses that are added to the curricula of other fields of health so that physicians, nurses, pharmacists, psychologists, and other allied health professionals receive training in skills, such as epidemiology, analysis, cultural sensitivity, and strategic thinking, that will enable them to contribute to the populations' public health needs.

Academic leaders must work with health authorities to develop the appropriate curricula for the academic institutions—as well as for the permanent education and in-service offerings—so that the public health curricula train students in the competencies that are needed according to the investigation. In addition, academia should contribute information and data to the development of the public health workforce through on-going research on human resources issues and specifically on health human resources.

Many public health professionals have little advanced knowledge or skills in public health, and very few have management training or leadership training to organize the public health workforce or to develop policies that support the development of public health human resources. For example, in the United States, only 20% for the nation's estimated 400,000 to 500,000 public health professionals report having formal public health education.¹³

By expanding the public health education focus and curricula into all health education programs—both for the current workforce and for the future workforce—the Region will be better prepared with the competencies that are needed to carry out public health activities and to perform public health functions. This step is a key element in improving the public health capacities of the countries' human resources, and thus meeting PAHO's assessment indicator #3 for measuring progress: "continuing education and graduate training in public health" is achieved to a greater extent.

LABOR PLANNING

As education and training is one part of incorporating the needed competencies into the workforce, the second part is the professional / labor component. Labor planning involves assessing the current situation and future projections of needs and gaps in the workforce and determining within that context, what job positions/posts should be filled, should be created, or should be adjusted (in job description or requirements) to match the needs of the institution and the services it provides. The creation, adjustment, and filling of job posts should be needs-based and function-driven and should be coordinated with the health authorities. In addition, labor planning needs to incorporate guidelines for filling these positions/posts, considering worker/union demands as well as professional association desires to protect the integrity of individual professions and improve and enforce professional standards.

¹³ "Public Health Workforce Development: Third Annual Meeting," CDC; January 2003.

The labor authorities, coordinating with both the health and education sectors, need to address three groups of job positions: jobs that are specifically defined as public health positions, health human resource positions that are not public health positions but participate or need to participate in public health activities, and job positions in the secondary workforce that either do contribute or need to contribute to public health functions.

In responding to the gaps and weaknesses revealed by the characterization study and performance assessment, the public health positions may need to be increased in number or adjusted in terms of reference to meet the needs of the populations and the institutions in which they serve. In addition, as it becomes more clear where other health workers, outside of the traditional public health workforce, are involved in public health or use public health competencies in their daily activities, those post descriptions and requirements may also need to be adjusted to reflect those responsibilities. Sometimes it may be necessary to bundle activities performed or competencies needed into a new position and to create a post, which may have degree requirements or skills prerequisites. In this case, it will be particularly important to coordinate with the education sector to synchronize the training or degree programs that will be targeted for those types of new positions.

In the secondary workforce, other sectors may be involved in adjusting posts in related fields, outside of health, so that workers in those other fields can coordinate their public health activities with the health workforce.

Surge capacity is an important consideration in developing the public health workforce. Unlike some other workforce groups, the public health workforce is uniquely challenged with the necessity for being prepared to respond to unexpected crises that may quickly demand immediate additional resources. These possibilities require that the labor planning incorporate flexibility in the workforce structure.

Finally, in labor planning for human resources in public health, the finance authorities must be part of the development process. Recruiting the support of the financial sector, as well as soliciting of funds from donor or lending agencies, can be particularly difficult in health human resources development. Because health systems strengthening efforts are long-term efforts and require long periods of time before results are seen, and because the results that come from human resources improvements are difficult to quantify, the human resources planners and policy makers must overcome challenging obstacles to expanding the fiscal space for health systems support. In particular, the cost of salaries are high per unit, and demand higher proportions of the health budget than do short term or medium term vertical interventions, which can show immediate measurable improvements.

Building and strengthening public health competencies in the health human resources requires the cooperation of all levels of government (national, regional, and local) as well as multiple sectors across the government (education, labor, budget). These horizontal health development strategies not only must have the political will and economic support of the government, but also must be backed by data and information, which comes from the consistent tracking and organization of information, as well as from academic research on health human resources. In addition, labor representatives or unions and professional organizations must be included in the development planning so that the workers themselves will be committed to the importance of improving the public health functions of the health institutions and motivated individually to deliver quality services throughout the population. Recruiting this kind of broad-ranged support and engagement requires strong leadership and political advocacy.

ADDITIONAL DEVELOPMENT STRATEGIES FOR STRENGTHENING AND SUSTAINING THE PUBLIC HEALTH WORKFORCE

Strengthening the public health competencies of the workforce must be part of a wider integrated development plan. The key to successful health systems is the development and sustaining of a well-trained, well-allocated, motivated workforce. To sustain the development efforts there must be an holistic approach to addressing the variety of issues that affect this end:

ALLOCATION AND DISTRIBUTION

As the workforce is educated and trained, the human resources need to be distributed in numbers and in skill sets so as to ensure that all members of the population have access to the health care. The Joint Learning Initiative's publication, "Human Resources for Health: Overcoming the Crisis" recommends that there should be 2.5 skilled health care workers (doctors and nurses) per 1,000 population to achieve the desired 80% coverage level.¹⁴ These criteria are calculated according to needs for skilled attendance at childbirth and for achieving thorough measles immunization. Public health activities, such as promotion, monitoring and enforcement, and education are difficult to measure in a context of ratios per population numbers because these tasks do not always involve direct relationships between individual health workers and users. Therefore, the quality measurement proxies introduced in the characterization process will reveal where workers and/or users perceive that the number and/or skill set within the health teams is insufficient.

Often rural areas experience shortages of medical services. The characterization of the workforce, particularly the proxy on quality performance and needs gaps, should provide evidence as to where the shortages are most acute. **Health authorities must actively recruit human resources into these shortage areas.** Salary is always a powerful enticement; however, many times the budget restrictions or political consequences of financial incentives create too many obstacles. Therefore, other types of non-monetary incentives must be considered. Different professions will respond to different types of incentives, and some incentive packages may be more effective in some countries while other types of offerings will be successful in others. Non-monetary incentives that should be considered are both professional (such as career advancement opportunities, educational support, or improvement of equipment and resources in the institution) and personal (housing assistance, schooling for children, job opportunities for spouses).

The recruitment efforts must be aimed not only to increase the number of trained health workers to an area, but also to build the right skill set combination. In addition, areas in rural environments or poor populations may pose unique health care needs that require particular competency sets to meet. Therefore, policies to scale up services in rural and outlying areas or poor underserved populations must be specifically designed to meet the needs of that population being served.

Needs-based planning is important because different regions of the country may have varied cultural or social environments which affect the way health care is received or interpreted; for example, there may be ethnic groups that require special language skills or social awareness. Therefore, **health workers that are recruited to and employed in these areas must have not only the right knowledge and technical skills, but have the right competencies in attitudes and social sensitivities.** In addition, health workers need to be

¹⁴ Chen, L., Evans, T., Anand, S., Bouford, J.I, Brown, H., Chowdhury, M.; "Human Resources for Health: Overcoming the Crisis;" Lancet; JLI 2004.

prepared to provide outreach to be able to extend services to groups who may not actively seek care due to discrimination, fear of health institutions, or inability to transport themselves. (These groups may include sex workers, men having sex with men, elderly and feeble).

In summary, to achieve effective distribution, health planners need to look not only at numbers but also at skill set combinations when planning the distribution and allocation of its human resources teams, with attention to the social sensitivities, value sets, and special needs of the varied population groups.

Flexibility is also important in allocation and distribution strategies. Particularly with regard to public health concerns, rapid response ability plays a key role in preventing the spread of disease and protecting the population. As discussed earlier with regard to labor planning, **health resources planners need to allocate competency sets and personnel numbers in a way that allows for surge capacity**, where workers who do not traditionally use specific competencies may be called upon to contribute to public health needs, or where workers can be moved easily from one area to another without leaving significant gaps in care.

RECRUITMENT AND RETENTION

Having trained and allocated the public health human resources successfully, the next challenge is to maintain the workforce.

Particularly in the health care field, retention is challenged by the strong pull factors from the more developed countries. Many northern and more developed countries engage in recruitment campaigns to fill their own shortages with migrant workers from the south. In addition, individuals who wish to pursue higher wages, safer or better-equipped working conditions, and career path potential can earn a nursing degree as a means to gain entry into more developed countries. The countries that suffer shortages the most acutely due to emigration of their nursing workforce are in the African region. However, also in the Americas, the Caribbean loses nurses to emigration as well.¹⁵ The strain on the home country is compounded as the country not only loses needed human resources but also loses the investment made to train these workers.

In the countries of Latin America, internal migration is often more of a problem than is migration out of the country. After completing their education, health care workers often seek work in the urban areas, leaving the rural and poorer areas with shortages. They also move from the public sector to the private sector to earn a higher income, exacerbating the inequities in access to care.

Health authorities will not be able to address the overall social and economic push factors that are common in under-developed countries and rural areas; nor will they be able to diminish the appeal of more developed countries or urban centers, but they can minimize push factors within the health sector to slow migration and retain skilled workers, and thus reinforce human resources development efforts, through targeted recruitment and retention strategies.

When evaluating the success of health care systems, the indicator factors that must be considered are not only the health status of the population and the satisfaction level of the users, but the situation and satisfaction of the workers as well. Understanding worker concerns and mitigating the problems will help reduce not only migration but also attrition rates.

Low wages is the top motivation for emigrating claimed by health workers from the most under-developed countries, followed closely by poor working conditions and lack of career path opportunities.¹⁶

¹⁵ United Nations, Economic Commission for Latin America and The Caribbean (ECLAC) / Caribbean Development and Cooperation Committee (CDCC); "Emigration of Nurses from the Caribbean: Causes and Consequences for the Socio-Economic Welfare of the Country: Trinidad and Tobago – A Case Study;" 2003.

¹⁶ "International Migration of Nurses: Funds and Policy Implications;" policy paper #5 of the "Global Nursing Review Initiative: Policy Options and Solutions;" Burdett Trust, International Council of Nurses, and Florence Nightingale International Foundation; 2005.

When possible, funds need to be appropriated to provide adequate salaries and benefits for health workers. Almost 50% of national health budgets go to human resources,¹⁷ and there needs to be funding policies that provide adequate wages not only to support retention strategies but also to establish a sense of value and status for the health worker so that their value is supported. Adequate pay also contributes to the level of motivation and commitment of the workforce to their mission.

As addressed in the section on labor planning, health authorities must balance budget demands with worker demands and with the expectations of professional groups. **These groups must be given the opportunity to participate in the policy-making and planning so that compromises are more easily reached.** Appropriate benefit schemes that provide education or other non-wage support can be useful when financial resources are scarce.

Many health workers, particularly nurses, work long hours with low wages in conditions that are not only lacking equipment and technology, but are sometimes dangerous due to the lack of safety regulations and due to violence.

Health authorities, when planning a development strategy, should secure and ensure the safety and health of the workforce and improve the conditions of the working environment to sustain the workforce. Safety regulations should be implemented to provide protections in the environment (such as making sure that fire alarms are installed in the workplace) and in the equipment (such as needle guards). These low-cost, easily-implemented protections decrease the number of accidents in the work place significantly. Building codes and equipment standards need to be maintained, monitored and enforced to ensure the safety of both the health workers and the users. For these reasons, allocation of funds to equip and support the health workers is just as important as the allocation of the salaries to employ them.

In addition to safety, the health of the workforce must also be protected. **All health workers should be provided with regular vaccinations and easily accessible medical care.** The health of the health workers strengthens the stability of the health systems, and better protects the health of the populations as well.

Career path opportunities also improve retention. Opportunities to grow within the public health career—such as step level advancements tied to experience or skills increase, management positions and leadership responsibilities and inclusion in strategic planning decisions—improve worker satisfaction and increase motivation and commitment to the mission of providing quality care to meet the needs of the population. In re-defining and adjusting public health positions, as well as the positions of other health workers involved in public health activities, **health authorities should coordinate with labor representatives and professional organizations to build career path options and opportunities for professional growth** within the job position structures of the health institutions.

Retaining the numbers of skilled workers and recruiting additional workers to strengthen the workforce helps to alleviate the long hours and heavy case loads that cause many health workers to suffer burn-out and leave their jobs to immigrate to another country or to change professions. In addition, when resources are not as stretched, accidents in the workplace decrease, the number of mistakes in care delivery declines, and the quality of care improves.

While retaining the current workforce, planning for the future workforce is just as important in maintaining the stability of the health system. Improving wages, benefits, and career opportunities improves the attraction of the health careers so as to draw greater numbers of students and adults re-entering the workforce into the field of health.

Recruitment needs to begin in the early academic years of the students—even before secondary school—not only to entice the desire of the students to pursue careers in health, but also to begin building the necessary capacities so that students develop the knowledge and understanding that is necessary to progress in health fields. Public information campaigns should be used to frame health care careers as interesting and desirable. At the same time, teachers, counselors and other influential adults in the community should be recruited to encourage students with potential to consider health careers. Leaders of professional

¹⁷ World Health Organization; Working Together for Health: World Health Report 2006.

organizations should contribute to this effort to ensure the sustainability and continued growth in quality of their professions.

Understanding the competency needs in public health should guide recruitment strategies so that they are targeted to attract the students that are most appropriate into the studies that are most needed. Education stakeholders and government sectors can cooperate with professional associations to build interest in the health fields needed, identify students with potential or talents in key needed areas, and train students in skills and knowledge that will be important in developing the public health capacities of the health human resources.

It is important to target students with the appropriate potential and intellect to the matching courses and degrees and career track. Drop-out rates are high in university and graduate level health education programs. In the 1990's, the average attrition rates of students from medical schools was 75% in Ecuador and 63% in Peru, while attrition rates for nursing programs and dentistry programs were also high.¹⁸ **Not only should the academic community be selective and targeted in accepting students into health programs, but it should also provide support to the students during their academic career**, such as establishing student advisor programs and joining efforts with professionals to provide mentoring arrangements. Some students drop out of health programs due to inability to complete the work, but others are unable to complete their studies because of cost. In workforce planning, and establishing appropriate curricula and degree programs in the academic institutions, cost must be explored to see if it creates an obstacle to attaining the number of graduates needed to supply the future workforce.

Recruitment efforts should also be targeted toward second-career workers and older adults who may be coming into the workforce from other careers or may be re-entering the workforce after time away (returning immigrant workers, adults who change careers, or adults who have shifts in family responsibilities). Many of these individuals, due to prior work experience and maturity, may offer important needed competencies. To recruit these workers, opportunities to enter into the workforce must be widened and permanent education offerings must provide the training and certification needed to facilitate that workforce entry.

Retention and recruitment efforts such as the ones described above should be part of a human resources development strategy. These initiatives, implementing different activities to meet the different country or area needs, will help to slow migration out of the countries and to manage migration within the countries. **Health authorities should also enlist the cooperation of the private health sector** because of losing public health workers to the private sector, leaving open posts and also causing instability in the human resources make-up and thus threatening equity of access to care.

ADVOCACY

Part of human resources development strategies need to include specific plans for advocacy and promotion. Stakeholders and actors need to advocate the importance of health human resources as the cornerstone of successful health systems. While donors offer funds and resources to support vertical responses to health needs in developing countries, health authorities and other actors must recruit adequate proportions of those funds and resources to support the human resources that implement these interventions and ensure their results. Because health system strengthening investments are long-term, and immediate results are difficult to measure, it is challenging to recruit to motivate support and gain sustained commitment from the international aid and funding communities as well as from the country governments.

Part of the advocacy strategy includes the soliciting of support and cooperation of other government sectors. The ministries of health, as discussed earlier, must coordinate with education authorities and stakeholders, labor planners and union groups. In addition, strengthening the health human resources in

¹⁸ Cameron, Rick; "Trends of Health Human Resources in the Americas: Evidence for Action; report for Health Canada and the Pan American Health Organization; 2006.

public health functions involves sectors of government that work in environment, defense and safety. The policies and programs of these sectors must be coordinated with the efforts of public health strategies to achieve effective public health plans. Third, the support of budget and appropriations decision-makers must be recruited to enable the implementation and sustaining of public health activities and interventions. Finally, stakeholders in health human resources must advocate at the global level to focus attention of donor agencies, funding institutions, and technical support organizations on the importance of human resources in health development efforts and encourage a larger fiscal space to support health systems development as part of international aid activities.

PLANNING AND POLICY MAKING

The ministries of health must have the capacity and commitment to develop effective health human resources plans, to effect policies that support those plans and to manage the implementation of interventions and activities that achieve improvements.

It is helpful if the ministries of health dedicate an individual or a unit within the ministry to be specifically responsible for health human resources to plan and coordinate the development activities recommended above. Because human resources planning and management is so complex and requires the coordination of so many variables and efforts, it requires a person or group to integrate human resources activities with the health goals of the country. In addition, planners and policy makers must continually update data on the public health human resources situation and the public health workforce characterizations so that the policies may be based on sound and current evidence. Planning needs to reflect and respond to the epidemiological changes of the country's health needs as well as the demographic shifts of the country's population.

Decentralization of planning, policy input, and management of health human resources is also beneficial to the effectiveness of the performance. . PAHO's indicator #5 for measuring the level of development or progress of human resources in public health is "Technical assistance and support to the sub-national levels in human resources development." If human resources planning and leadership are closely linked to the area in which the workforce operates, problems may be seen or understood sooner than if the systems are monitored only from the central government level, responses to needs may be more quickly implemented, and local cultural sensitivities will be better understood so policies and management of the human resources may be better crafted and implemented to fit the population. Empowering the sub-national levels to develop human resources planning policies that fit their individual needs particularly helps to strengthen the rural and disadvantaged regions that have less political influence at the national level. It is important to equip the local levels with the financial resources and technical support they need to plan local human resources strategies and implement policies. In addition, this planning must be done in coordination with national planning so that the country as a whole is moving together to improve the human resources in public health.

Public health planning involves a global understanding as well as abilities in national and local governance. Environmental, political and social variables that result from global events and circumstances affect the health situation of the country and the human resources, particularly those human resources responding to public health needs. Therefore, leaders in health need to incorporate a global awareness and international cooperation into their national and local development strategies.

QUALITY, PERFORMANCE, AND EQUITY: ESSENTIAL IN THE DEVELOPMENT OF HUMAN RESOURCES IN PUBLIC HEALTH

QUALITY AND PERFORMANCE IN PUBLIC HEALTH WORKFORCE

The second of the five indicators established by the Pan American Health Organization for measuring the progress and success in developing public health functions in the health human resources is “to improve the quality of the health workforce.” Building public health competencies and recruiting and retaining the human resources numbers and skills combinations needed to perform public health functions is only effective if the health workforce delivers quality services, and the institutions that train the public health workers provide quality education. **Quality standards, establishing indicators to measure and evaluate performance in relation to those standards, and enforcement of quality practices should be included in all development strategies.**

As part of the development strategy, institutional quality and performance must be required by the health authorities, and standards must be enforced. In Latin America, often the professional organizations and associations monitor and enforce standards and quality performance in the institutions and within the professions. However, it is recommended, to avoid conflicts of interest and to ensure objectivity and accountability, that the health authorities establish independent councils or regulatory bodies to be responsible for monitoring and enforcement.¹⁹

The academic associations and accrediting boards must establish conditions for the accreditation of educational institutions in public health and identify component standards for particular degree and certificate programs of the educational offers. These requirements need to incorporate processes for regular evaluation of education programs and processes to validate the relevance of curricula to the needs and health trends of the population. As part of health systems strengthening efforts coordinated with human resources development activities, health provider institutions (hospitals, clinics, etc) must also maintain performance standards and must meet safety and health regulations. **The health authorities are responsible to establish those standards for health institutions and must monitor and enforce compliance.** This enforcement is particularly challenging in public health crises because institutions, as they adjust to respond to immediate needs, might stretch their resources and re-focus priorities that result in a circumvention of safety procedures and quality protections.

Requirements for quality standards must also be applied and enforced for individual health worker performance. The health workers must be trained in the best practices of their field and must be given specific guidelines regarding performance expectations and regulation requirements. Indicators should be established to measure quality of task implementations and service delivery procedures, compliance with regulations, and user satisfaction. Quality and performance standards not only improve the care delivered, and thus improve the health situation of the population, but the evaluation of the performance quality also contributes to job satisfaction. When workers understand expectations and receive recognition for their achievements in regularly scheduled job performance reviews, the job satisfaction increases and the performance continues to improve.²⁰ Performance measurements are helpful with career planning and benefit and wage compensation strategies as well. In addition, monitoring and evaluation of health worker

¹⁹ Homedes, Núria and Ugalde, Antonio; “Human Resources: The Cinderella of Health Sector Reform in Latin America,” *Human Resources for Health*, 3:1; 2005 .

²⁰ Edited by Griffiths, Siân and Wright, Jenny; “Public Health Capacity: The Challenges for Public Health;” Faculty of Public Health Royal Colleges of Physicians of the United Kingdom; 2004.

performance reveals gaps in competencies and then contributes to updating process of education and training plans.

Public health activities can pose unique obstacles to performance evaluation. While performance assessments of clinical health activities allow for more clear and tangible health situation indicators, such as mortality rates, recovery rates, wait times, and patient satisfaction, the assessment of public health achievements includes the need to measure the absence of health problems as well. For example, in assessing the success of prevention and protection activities, the decline or abatement of a disease, the mitigation of risk factors, or the containment of an epidemic certainly provide evidence of success, but are hard to quantify. In addition, the positive effects of education and promotion campaigns or the success of protection strategies and prevention activities that achieve the absence health problems are difficult to validate. Furthermore, in this case, the clients/users may under-rate their level of satisfaction because there is not a comparison negative experience against which to measure the success of the prevention practices of public health. Therefore, determining whether public health capacities in the health human resources have been developed sufficiently and whether best practices are being followed in an effective way can be difficult to measure in terms of evidence. Planners must often depend on perceptions of the users, managers, and workers.

EQUITY: AN INTRINSIC GOAL IN PUBLIC HEALTH

Among the conclusions reached by the participants in the expert discussions, it was emphasized that ensuring equity is a crucial ideological element of the responsibilities and objectives of public health.²¹ The fourth indicator for measuring the success of EPHF #8 is “upgrading of human resources to ensure culturally appropriate delivery of services.” Part of ensuring equity is developing the competencies of the workforce to understand and to be able to interact with culturally and socially diverse backgrounds and the special needs that may correspond (as discussed in the distribution and “Allocation and Distribution” section of this paper).

Some population groups, particularly indigenous peoples, immigrants, the elderly and ethnic minorities, are more vulnerable to health threats due to poverty and disenfranchisement. They may have less access to care, less education regarding prevention practices, and cultural behaviors or norms that may put them at risk. Other groups, such as women, sex workers, or men that have sex with men, are more vulnerable in society due to a lower social status (which prevents their financial independence or emotional empowerment) or due to discrimination. These groups may avoid health care, may suffer unique illnesses for which care is not provided, and may be susceptible to violence and abuse. Part of the mission of public health activities is to provide universal care and to diminish the health inequities that result from disenfranchisement and discrimination.

Although equity should underpin all efforts to improve health and all undertakings of the health workforce, equity has a unique importance in the realm of public health because often the under-served populations must be protected and cared for through political commitment to public good because otherwise these populations may be neglected.

More practically, if there are population groups that do not receive care or whose cultural habits might make those populations vulnerable to related health complications, these factors threaten the health of the population as a whole.

²¹ See report on international workshop of Costa Rica; “Strengthening the Capacity of the Public Health Workforce to Support Essential Public Health Functions and the Millennium Development Goals;” San Jose, Costa Rica; 2005.

CONCLUSION

The year 2006 has been named the year of human resources in health by the World Health Organization. The crisis in health human resources can no longer be ignored, and the global actors have called for a decade of commitment to improve and support the health workforce. In the Americas specifically, the *Toronto Call for Action*²² calls on all countries of Latin America and the Caribbean to dedicate financial resources, political will, and specific interventions/activities that will develop and improve the human resources for health. This call to action came out of a Region-wide assessment of each country's human resources situation, and a synthesis of country profiles to identify the primary shared challenges to an effective health workforce. Subsequent to the *Toronto Call to Action*, the countries of Latin America and the Caribbean, individually and collectively within sub-regions, are preparing strategies to overcome the challenges and build a stronger, more quality health workforce.

These strategic plans should include the strengthening of the eleven public health functions and in the building and improving of public health competencies of the health human resources.

The public health functions are performed not only by those health human resources that are identified specifically as public health workers, but are carried out, in varying degrees, as part of the daily activities of the wider health workforce at all levels of care. The primary health care workers, particularly, accomplish public health activities as a significant part of their care delivery, even though the workers may not self-identify themselves as public health care workers and their job titles or job descriptions may not reflect or list these public health activities. In addition, there are health workers throughout the health system—and even in other fields outside of health—who may rarely or never perform public health functions, but may have the competencies (the knowledge, skills, abilities, and attitudes) to perform those functions, and thus may prove to be valuable human resources in times of crises or emergencies when surge capacity is important.

To develop and strengthen the capacities of the countries of the Americas to perform the eleven public health functions, the competencies needed to perform these public health functions must be identified, and then the institutions should be assessed according to whether or not they have the necessary institutional core competencies.

Gaps in competencies can then be filled and strategies for strengthening and widening those competencies can be developed. Academic and Labor sectors will be important in coordinating efforts with the health authorities when developing the education and training programs and the employment strategies to improve the public health competencies of the health human resources.

The 'public health workforce' cannot be developed in a vacuum. Any plan to strengthen human resources in public health depends on the development and continuous improvement of the whole of the health human resources, as well as the infrastructure that supports them and the system in which they operate. Allocation and distribution plans, retention and recruitment strategies, advocacy, and policy development are all part of the development of the health workforce. Equity is a goal that should underpin all efforts and activities in health, and is particularly important in guiding development of public health competencies.

The quality of health services and the performance standards of the health human resources are key elements in an effective health workforce. Best practices need to be identified, standards set, and

²² Health Canada and PAHO, supported by the Ontario Ministry of Health and Long-term Care co-sponsored the "VII Annual Meeting of the Observatories of Human Resources in Health of the Americas" in Toronto in October 2005. The meeting brought together 29 countries, including seven Ministers of Health, leaders in the HHR field, and international donors and sponsors to recommendations on how to move forward in overcoming challenges to the development and improvement of health human resources, and how to move forward toward longer-term health goals. The meeting resulted in a Toronto Call to Action to develop common strategies for collaboration to meet the five common critical challenges that face the development of HRH in the Region of the Americas. To view the Toronto Call to Action, visit: http://www.observatoriorh.org/Toronto/CallAction_eng1.pdf.

measurement indicators established to achieve quality in the delivery practices and in the care received. In addition monitoring and enforcement processes will ensure compliance to standards and regulations as well as consistency in care. Regular performance reviews, as part of the monitoring and enforcement process, will re-enforce best practices in institutions and will motivate the workforce.

Continuous evaluation and validation that competencies are meeting the needs, and that standard practices are achieving the health goals will provide feedback and enable the adjustment of plans and policies to respond to changing epidemiological and demographic shifts in the populations. Research is also an important factor, so human resources data can provide evidence and guidance to support new policies and plans.

An holistic approach is necessary to develop and strengthen the human resources in health of the countries of Latin America and the Caribbean so that they can better carry out the activities required to perform the essential functions of public health, and thus coordinate well with other sectors within the country and other countries and regions, in the larger effort to achieve the Millennium Development Goals.