

# Public Health Worker Shortages

**Trends** *Alert*  
Critical information for state decision-makers



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# **Public Health Worker Shortages**

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The Council of  
State Governments

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## Executive Summary

The efficiency of the nation's public health system depends on the quantity and quality of its work force. Experts, however, have recognized deficiencies in this critical feature of the public health system for more than a decade. The issue has come under new scrutiny since the Sept. 11 terrorist attacks, and the anthrax-contaminated letter mailings in the fall of 2001 revealed the loopholes in the nation's bioterrorism preparedness and response capacity at the state and local levels. In contrast to the significant improvements that states have made in coordination and communication capacity in recent years, progress in improving work force issues is lagging.

The Council of State Governments, in conjunction with The National Association of State Personnel Executives (NASPE) and The Association of State and Territorial Health Officials (ASTHO), surveyed human resource directors in state public health offices in late 2003. Our survey revealed several public health work force issues, such as:

- high vacancy rates;
- high turnover rates;
- aging of the work force; and
- high retirement eligibility.

Certain fields in public health are particularly suffering from work force shortages, including:

- nursing;
- epidemiology;
- laboratory services; and
- environmental health.

The results of the survey point to a number of short- and long-term approaches that states are taking to remedy the shortage, such as:

- promoting educational opportunities;
- providing professional training;
- partnering with educational institutions;
- increasing pay, benefits and flexibility;
- marketing public health careers;
- using information technology and the Web; and
- training future public health leaders.

This *TrendsAlert* first focuses on public health work force issues identified by the survey. The second section of the report examines those public health professions that are most critically affected by work force shortages. The third section discusses various approaches states are taking to address the public health work force shortage. The section also identifies what states consider to be the keys to solving the human capital crisis. The appendix contains a state-by-state overview of strategies considered for improving public health staffing issues.

## 1. Public Health Work Force Concerns

Our survey revealed several public health work force concerns with which state officials should be aware:

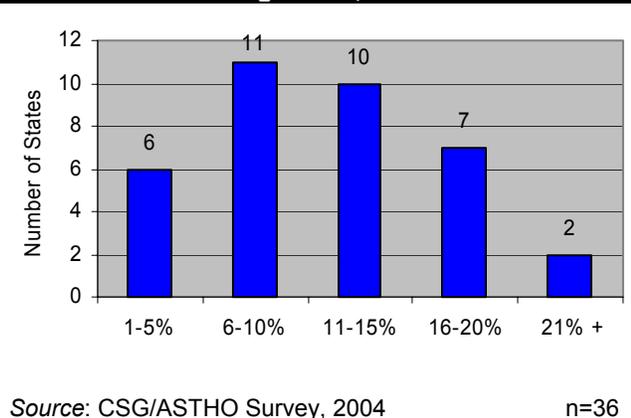
- high vacancy rates;
- high turnover rates;
- aging of the work force; and
- high retirement eligibility.

### High Vacancy Rates

Vacancy rates are one sign of work force shortages. Vacancy rates in state public health agencies average 11 percent, according to the results of our survey.<sup>1</sup> This is in line with the results of the 2002 CSG/NASPE survey of all state personnel directors that found a vacancy rate of 11 percent for all state government jobs.<sup>2</sup>

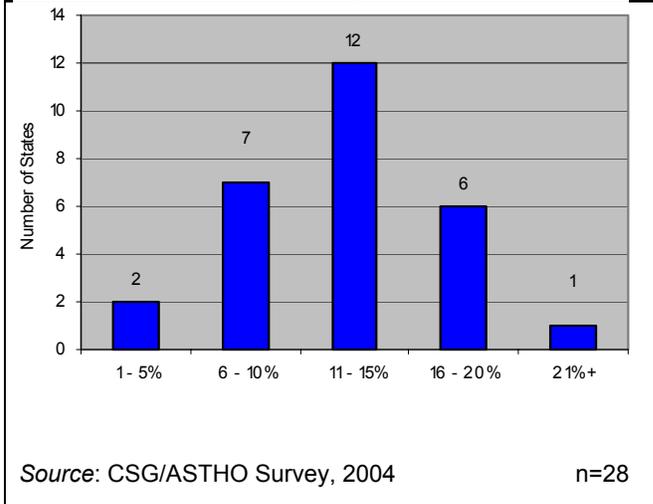
A few states have relatively low vacancy rates, ranging from 1 to 5 percent, and 11 states have vacancy rates in the range of 6 to 10 percent. Ten states, however, have higher-than-average vacancy rates of 11 to 15 percent. Alarming, seven states have vacancy rates of 16 to 20 percent and two states have vacancy rates of more than 21 percent.

**Figure 2.1 Vacancy Rates in the State Public Health Agencies, 2002**



Although vacancy rates are high in some states, they are not on the rise. Fourteen states reported that the percentage of state health agency vacancies remained unchanged or declined in the last five years.<sup>3</sup>

**Figure 2.2 Turnover Rates for State Public Health Workers, 2002**



### High Turnover Rates

According to our survey results, the average annual employee turnover rate was more than 12 percent in 2002. One state, however, reported an extremely high turnover rate of almost 30 percent.

Although in most states the turnover rate is not alarmingly high and is comparable to the turnover rate for all state government employees, hiring freezes and shortages in the supply of professionals have made it difficult for some state public health agencies to fill in the vacated positions in time.<sup>4</sup>

### Aging of the Work Force

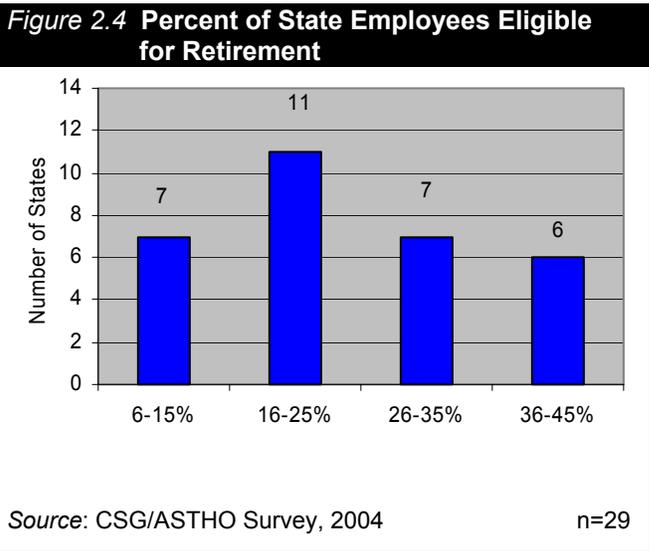
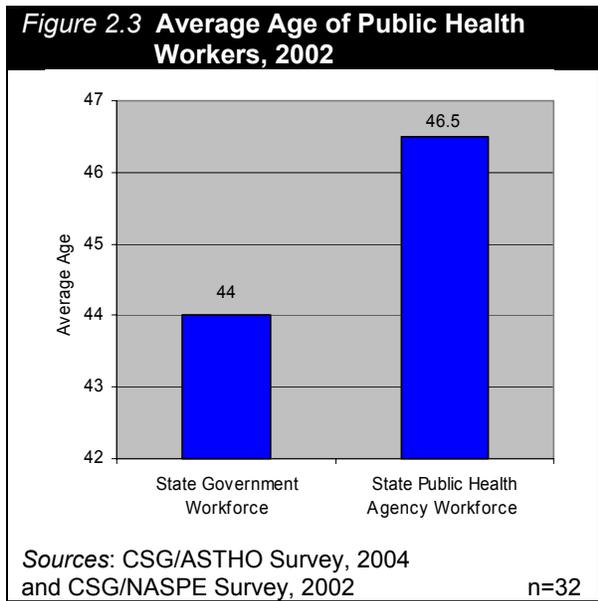
In addition to vacancy and turnover rates, public health officials must deal with the realities of work force demographics. Baby boomers – those individuals born between 1946 and 1964 – make up the majority of the U.S. labor force.

According to our survey, the average age of public health employees is almost 47, which similarly points to the predominance of baby boomers in the public health work force. This is a little higher than the average for all state employees, which is 44 years.<sup>5</sup>

### Retirement Eligibility

On average, about 25 percent of the public health work force is eligible for retirement. This is slightly higher than the average retirement eligibility of 21 percent for all state government workers.<sup>6</sup>

Retirement eligibility, however, is incredibly high in some states. More specifically, retirement eligibility of public health work force is 40 percent or more in five states.



Combined with the fact that the public health work force is aging, retirement eligibility will increase in coming years. This will continue to be a major concern for state public health agencies across the country as they try to recruit and retain sufficient work forces.

Public health officials across the country are concerned with relatively high vacancy rates and annual turnover rates, an aging work force and a large percentage of the work force eligible for retirement. Some professions within public health, however, are being hit hardest by these trends. These areas are discussed in the next section.

## 2. Work Force Shortages In Specific Public Health Professions

Our survey asked public health officials to identify which public health areas are most critically affected by worker shortages. Respondents identified work force shortages in several public health fields, including:

- nursing;
- epidemiology;
- laboratory services; and
- environmental health.

## Nursing

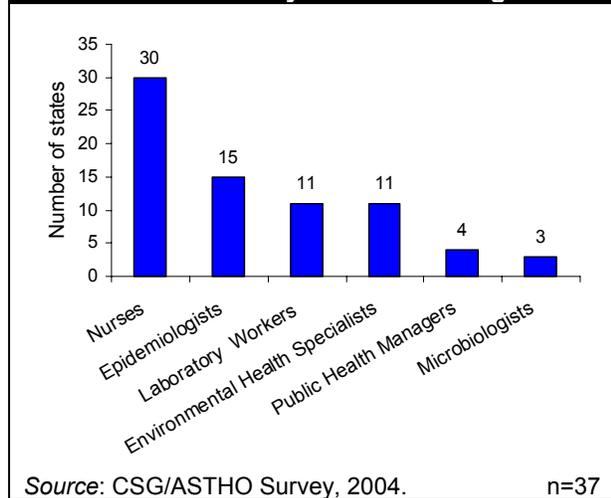
The survey found that the work force shortage issue is most noticeable among public health nurses as illustrated in Figure 2.1. Thirty states identified nursing as the field most affected by worker shortages.

The results of our survey are in line with those of other surveys. For example, 26 percent of 518 local public health agencies surveyed by the National Association of County and City Health Officials identified public health nurses as the most needed professional area; 28 percent of them stated that nursing will be the most needed area in five years.<sup>7</sup>

Nurses are a very important part of public health infrastructure. In 2000, 50,000 public health nurses represented the largest identified professional group in public health. Nurses comprise 11 percent of total public health work force and 25 percent of all public health professionals.<sup>8</sup>

A part of the nurse recruitment problem is that young people are increasingly reluctant to enter public health nursing, primarily because of low salaries.<sup>9</sup> Overall job dissatisfaction is also a major factor contributing to the retention problem for nursing occupation.<sup>10</sup> This dissatisfaction is due to working conditions, heavy workloads, increased overtime usage, lack of support personnel and compensation that does not accurately reflect the inflation rate.<sup>11</sup>

**Figure 2.1 Occupational Classes Most Affected by Worker Shortage**



## Epidemiology

Fifteen states in the survey reported shortages of epidemiologists. This shortage is also highlighted in other surveys. A recent survey conducted by the Council of State and Territorial Epidemiologists, for example, showed that most state and territorial epidemiologists reported lacking sufficient staff and resources.

### Declining Public Health Work Force

The estimated national public health work force, including federal employees and salaried staff of a limited number of voluntary organizations, is 448,254.

This amounts to one public health worker for every 635 persons.<sup>12</sup>

In the 1970s the number of persons per one public health care employee was 457.<sup>13</sup> Considering this change, a significant erosion in public health capacity becomes apparent.

The number of full-time equivalent positions engaged in epidemiology surveillance has dropped from 1,700 in 1992 to 1,400 in 2002 nationwide, despite significant expansion in the scope and competencies of epidemiology over the last decade. Although epidemiology is known as the core science of public health, epidemiologists comprise fewer than 1 percent of all public health professionals. In addition, although most states are well prepared to respond to nationally prevalent diseases, few states have adequate capacity for observing, monitoring and responding to health emergencies caused by pathogens with bioweapons potential.<sup>14</sup>

The shortage of epidemiologists may be partly explained by the high level of education required for this profession: 28.6 percent of epidemiologists have doctoral level training, 40 percent have masters level training, 18.4 percent have bachelor level training and 13 percent have various other types of educational qualifications.<sup>15</sup> Barriers to recruiting and retaining epidemiologists in

the public health field also include noncompetitive salaries and a general shortage of professionals.

### **Laboratory Services**

Several states are facing laboratory personnel shortages, according to our survey. These results are in line with other surveys that have also found shortages of laboratory workers. A report by the Association of Public Health Laboratories includes data that, as of December 2002, reveals a severe shortage of qualified laboratory personnel in the states.<sup>16</sup> In that survey, 13 states reported no doctoral-level molecular scientist on staff, and 23 states reported only one. Most states agreed that at least two doctoral-level molecular scientists were needed on staff to ensure emergency readiness. Sixteen states reported no dedicated, full-time information technology specialist to manage laboratory information systems, and 18 states reported only one person serving in this capacity.

Health professionals employed in public health laboratories constitute 3.1 percent of the total public health work force and 7 percent of all public health professionals.<sup>17</sup> Public health laboratories are the backbone of the Laboratory Response Network, which is the nation's system for identifying, testing and characterizing potential agents of bioterrorism.<sup>18</sup> The shortage of information technology specialists seriously imperils states' ability to meet the national goal of timely and effective communication of laboratory results during an emergency.<sup>19</sup>

Because of the importance of laboratories in bioterrorism reaction and prevention, Congress provided \$146 million for fiscal year 2003 for improving the capacities of public health laboratories. Although the supplemental funding provides for hiring a skilled laboratory work force, the needed work force simply does not exist. Out of 22 states that did not meet the August 2003 deadline for preparedness benchmarks to receive grant money, 17 of them cited the difficulty in recruiting new staff as a major problem.<sup>20</sup> The Association of Public Health Laboratories cautions that policy-makers might erroneously assume that the reason some states are not spending the allocations by the deadline is the excess of work force development funding, when in fact intractable vacancy rates and physical unavailability of professionals are the core of the problem.<sup>21</sup>

### **Environmental Health**

Several public health officials in our survey identified a shortage of environmental health professions. "Environmental health" is a rather nebulous field category that comprises health issues that arise during human interactions with physical, chemical, biological and social factors in the environment. Professionals working in this field are often described as "environmental health specialists," "environmental engineers" and "environmental scientists." Environmental health specialists assess, correct, control and prevent factors in the environment that may have adverse affect on the population.<sup>22</sup> Many sanitarians, food quality and hygiene inspectors and infestation controllers are classified as professionals in environmental health.

There are slightly more than 20,000 environmental health professionals and technicians in the United States.<sup>23</sup> They comprise about 4.5 percent of total public health work force and 10 percent of all public health professionals.<sup>24</sup>

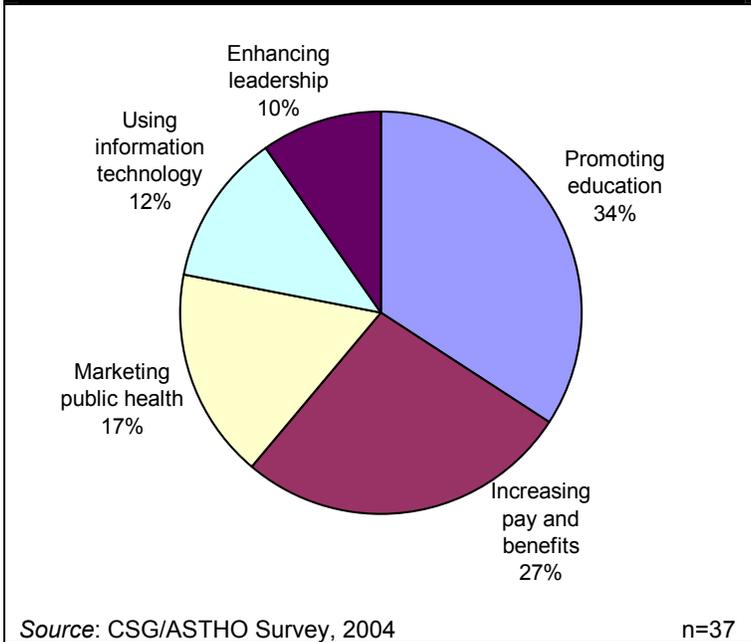
Because of the seriousness of the situation, public health officials are trying to find ways to recruit and retain a high-quality work force to meet both emergency and non-emergency public health needs. State actions and identified keys to success are addressed in the next section.

### 3. State Plans to Address Public Health Work Force Issues

State officials, challenged to develop effective strategies to meet the nation’s public health work force needs, are considering a variety of approaches to curb worker shortages. Some of these

strategies, displayed in Figure 3.1, have already been implemented, while others are still in the planning stages.

**Figure 3.1 Percentage of States Using Various Methods to Recruit and Retain Public Health Employees**



#### Promoting Educational Opportunities

More than 30 percent of the 37 states responding to our survey are promoting incentives designed to advance the competencies of their public work force, such as work-study arrangements, professional training, distance learning opportunities, loan repayment and scholarship programs. There are several interesting examples of their efforts to consider.

Florida’s Nursing Scholarship Program, for instance, provides financial assistance to nursing students. In return, graduates must commit to work full-time for two years in a state-designated facility in a medically underserved area. A similar Nursing Loan Forgiveness program is designed

to recruit public health nurses by offering to cover the principal of student loans and by helping to secure jobs at designated facilities in Florida.

Vermont’s Department of Health is promoting health-related educational opportunities by placing targeted ads in professional journals that emphasize the availability of student loan repayment for public health nurses.

New Mexico is offering educational leave with benefits to its public health workers. Their program includes payment of tuition and living expense stipends.

Educational incentives offer several advantages. They serve to keep the current work force up to date with the latest developments and keep them working in the health field. And the attainment of proper qualification through professional training and continuing education is essential for public health workers to meet the escalating demands of new medical technologies and methodologies.<sup>25</sup> Yet, an estimated 80 percent of the current public health work force today has little or no professional training in public health<sup>26</sup> or in their specific field within public health. For example, approximately 42 percent of the current epidemiology work force does not have formal training in the field, and few are involved in systematic research and publication activities.<sup>27</sup>

#### Innovative Proposed State Solutions

Some states are proposing innovative approaches to alleviating public health worker shortages:

- New Jersey is looking into developing a mid-life career change program to attract professionals leaving other careers.
- Montana emphasizes the need to educate legislators about public health work force needs.
- Kentucky is considering restructuring its state public health system.

### **Increasing Pay and Workplace Flexibility**

Almost a quarter of the states reported they are considering higher pay and benefits as work force recruitment and retention strategy. In Arkansas, for instance, state public health officials are looking at a system to improve salaries through increased recognition of new job skills and demonstration of these skills. Montana has a new performance-based pay plan that depends on budgetary constraints. Maryland uses recruitment and retention bonuses as incentives for employees in hard-to-staff areas. Vermont notes that the ability to move pay ranges quickly to attract and retain employees when the market shrinks for particular occupational categories would significantly help the state's recruiting efforts.

Although federal legislation enacted in response to the bioterrorism threat stipulated the creation of approximately 2,300 new jobs at the state level and additional positions in local agencies, no specific funding has been allocated to increase the overall pool of qualified professionals.<sup>28</sup> Moreover, the economic downturn and dwindling tax revenues are pushing states to reduce agency budget and associated staff.<sup>29</sup> These conditions are not conducive to increasing pay and benefits for the public health work force.

In a tight fiscal period, state budgets do not always allow for salary increases, so another way states are trying to increase the attractiveness of public health jobs is through non-financial benefits, including workplace flexibility. A few states are offering telecommuting and other flexible scheduling opportunities to their public health employees. States are hoping that this increased flexibility will help employee morale and attract more people to the public health sector.

### **Marketing Public Health Careers**

Some states are implementing recruiting strategies that promote public health careers in elementary, secondary and post-secondary schools. California has designed outreach programs for higher education institutions in general, and for schools of public health and health services in particular. Public health officials in Pennsylvania use speaking engagements at elementary and secondary schools as well as colleges and universities as opportunities to increase people's knowledge of public health employment opportunities.

The goal of these programs is to increase outreach and improve knowledge of employment opportunities in the public health field. The downside is that in some instances, this can be a long-term strategy that does not solve the current work force crisis. It may take several years for outreach engagements in elementary schools to translate into increased involvement in the public health work force.

### **Using Information Technology to Improve Recruitment**

Several states in the survey reported that they are using information technology and the Web to expand their outreach and optimize their marketing efforts. Connecticut and Hawaii both use the Web to advertise public health vacancies. And Maryland is using commercially available online recruitment services, such as Monster.com, to advertise staffing needs.

Technology is also being used to improve training. Tennessee's health department installed satellite and video conferencing equipment in the regional offices and some local departments to enable staff from across the state to participate in Nashville-based training classes.<sup>30</sup>

### **Enhancing Leadership Capacity**

Some states are trying to enhance the leadership capacity of their public health managers through leadership training institutes. The aim is to retain high-quality workers, increase the leadership skills of these workers and create an atmosphere of excellence that can help recruit and retain workers.

The Oklahoma State Department of Health, for example, has established the Oklahoma Public Health Leadership Institute in collaboration with various state educational institutions. And the

Public Health Leadership Institute at the University of South Florida is a year-long comprehensive development program to strengthen the leadership skills of public health professionals.

Leadership training may increase the skills of current workers and prove attractive to potential workers interested in becoming leaders. Building leadership, however, may not directly address the present work force shortage and might be considered a more long-term strategy.

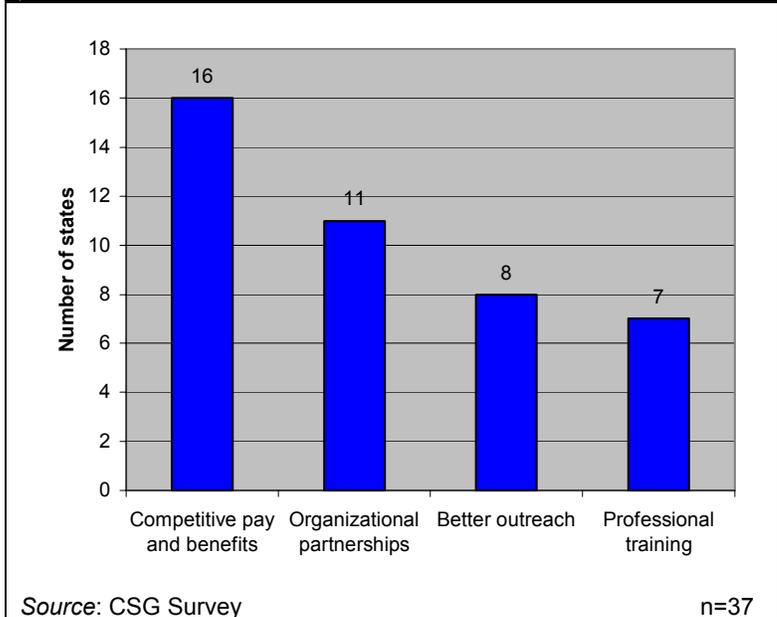
**Keys to Addressing the Work Force Crisis**

What state public health officials are currently able to do to deal with work force issues and what they would ideally like to do may not be the same. A number of factors, including budgetary constraints, hinder their ability to implement favored strategies.

For this reason, state public health human resource directors were asked to identify the keys to solving or preventing a human capital crisis in state health agencies. Our survey identified four keys to success:

- offering competitive pay and benefits;
- partnering with educational institutions;
- improving outreach practices; and
- providing professional training.

**Figure 3.2 Keys to Solving Public Health Work Force Problems**



**Offering Competitive Pay and Benefits**

Concerned about considerably lower salaries in the public health field compared to the private sector, 16 states consider offering pay and benefits that are in line with the private sector as the number one solution to public health worker shortages.

This may be one of the more expensive measures to implement. Because of this expense, raising salaries is difficult during fiscal downturns.

**Partnering with Other Institutions**

Eleven state public health officials surveyed considered partnering with various professional educational institutions to design public health programs and curricula to be a key to success.

Since a better preparation of public health work force includes educating all health professionals about the basic public health skills, states can develop basic public health curriculum units that can be adopted into any baccalaureate or graduate health professional program. This method ensures a larger pool of partners for public health organizations that reach out for collaboration in the future.

In implementing this strategy, the Oklahoma State Department of Health plans to formalize its relationship with nursing schools in the state by serving as a preceptorship site and using its nurses as lecturers and educators. Alaska also pointed to the need to expand its partnering opportunities to include more tribal entities, rural clinics and hospitals.

### *Improving Outreach Practices*

Eight states identified the needs to improve outreach to various educational institutions to recruit potential new employees and better market public health professions. Alabama and New Mexico are notably aggressive in using this idea. Both states are proposing reaching out to students as early in their educational career as elementary schools.

This is a longer-term strategy than other measures, such as raising salaries. However, it is a measure that has been useful in the private sector and may prove useful in the public sector as well.

### *Providing Professional Training*

Investing in human capital by providing professional training to current public health employees is another cited key to success. Seven states reported professional training for current public health work force as an important factor in solving work force retention problems.

Professional development can range from one-day seminars to multi-session trainings. It may take time for states to see the results of this training, but investment in professional development may help retain current workers and attract workers who are interested in professional improvement.

## **Conclusion**

An adequate supply of competent health professionals is a vital component of the nation's public health infrastructure. Even though this infrastructure is the first line of defense against natural or man-made health emergencies, public health agencies are facing shortages of critical health personnel. Our survey reveals various trends that point to some work force issues in the public health field: high turnover rates, high vacancy rates, high retirement eligibility, an aging work force and worker shortages in many occupational categories.

Staffing shortages in all areas of public health can produce severe consequences. One chilling example of the possible impact of work force shortages is the states' eroding ability to receive and distribute an emergency "push packet" from the Strategic National Stockpile, which includes 50 tons of pharmaceuticals, antidotes and other medical supplies. A timely and coordinated distribution of these supplies throughout an affected state is a crucial element of emergency preparedness against a bioterrorist attack. According to information from the U.S. Department of Homeland Security and Centers for Disease Control and Prevention, Florida and Illinois are currently the only states that can provide sufficient work force to receive and distribute medical supplies from the Strategic National Stockpile in a case of emergency.<sup>31</sup>

The strength of public health infrastructure depends on the adequate supply and training of professionals to carry out certain key functions.<sup>32</sup> Therefore, addressing public health work force issues is and will continue to be an important issue at the state level that policy-makers will need to address.

The results of our survey indicate that states are considering various approaches to public health work force recruitment and retention. These approaches include promoting educational opportunities, increasing pay and flexibility, marketing public health careers to potential new employees, using information technology to both recruit and retain employees, and training future leaders in the public health field to tackle these and other health care issues.

## Appendix I: State by State Review of Recruitment and Retention Strategies

Human resource directors of state public health departments were asked what kinds of plans are in place to meet staffing needs. They were also asked about new approaches to recruiting and retaining employees and what they considered to be the keys to solving or preventing a human capital crisis in state public health agencies. Below is a summary of information provided from all 35 states responding to these three questions.

### ALABAMA



short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The state is working with the School of Public Health at the University of Alabama, Birmingham to develop a paid internship program within the Department of Public Health. The Departmental Workforce Development Committee is exploring various ways to approach work force shortage challenges, such as offering raises when employees complete leadership institute or training center/preparedness center curriculum.

**Keys to solving the problem:** Offering competitive salary and benefit packages. Marketing public health as an appealing, exciting career path. Reaching out to elementary and high school children. Developing practical methods to retain and coach new leadership personnel, such as using leadership institutes to identify and train the next generation of leaders.

### ALASKA



short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The state is receiving support from the Northwest Center for Public Health Practice at the University of Washington to assess and support training needs and to share best practices in five Northwestern states. The state also supports the Northwest Center for Public Health Practice Leadership Institute by sending scholars there for training. Alaska is also proposing to utilize bioterrorism preparedness financial support to increase and build capacity for ongoing work force needs as well as emergency needs. In addition, Alaska has three full-time employees devoted to public health work force issues: Public Health Workforce Development Coordinator, Public Health Nursing Development Coordinator and Public Health Nursing Trainer for Bioterrorism.

**Keys to solving the problem:** Capitalizing on bioterrorism preparedness support to not only build preparedness and response capabilities but to use some of the same systems to improve the overall work force issues of retention, turnover and training. Working toward a better comprehension of public health competencies and building them into the systems of evaluation and training. Expanding partnering circle to embrace more tribal entities, rural clinics, hospitals and environmental staff. Working closely through funding and partnerships with nursing home associations to address work force issues such as retention, training and mentorship.

### ARKANSAS



short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Arkansas is considering improving salaries of all public health workers through increased recognition and demonstration of new job skills. This action would require legislative approval.

**Keys to solving the problem:** Increasing pay and benefits for state public health care personnel.

### CALIFORNIA



short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The state is using information technology to reach out to qualified applicants. The state is also utilizing targeted recruitment techniques. Outreach to schools of public health and health sciences helps in marketing the profession to young professionals in the medical field. California emphasizes mentoring junior staff and providing training opportunities for state employees.

**Keys to solving the problem:** Increasing the number of students graduating from nursing programs and schools of public health.

**CONNECTICUT**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The state uses the Web for advertising and recruiting initiatives.

**Keys to solving the problem:** Designing a recruitment strategy. Committing to strong public health education both for the existing work force and in undergraduate and graduate programs. Maintaining data on health work force supply and demand. Providing financial incentives such as loan repayment and/or scholarship programs.

**FLORIDA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The Certified Public Manager Program offers a comprehensive training and development program for public sector managers at all levels of state and local government that aims to professionalize the practice of public management. The University of South Florida offers the Public Health Leadership Institute is a year-long comprehensive development program that strengthens the leadership skills of public health professionals and those in the private sector who are working to improve community health. Florida's Nursing Scholarship Program provides financial assistance to nursing students in return for a two-year commitment to work full-time as a nurse in a designated site or facility medically underserved areas. The state's Nursing Loan Forgiveness Program assists nurses in paying off the principal of student loans and seeking full-time employment at a designated site or facility. The Educational Leave with Pay Program provides the Department of Health employees a full-time position for minimum of 24 months to attend school, full- or part-time, for up to 12 months. An applicant must show how the training will benefit the Department of Health. Also, Florida's Distance Learning Network Program offers more than 200 broadcasts per year.

**Keys to solving the problem:** Concentrating efforts on recruiting and retaining nursing staff.

**GEORGIA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Georgia is branding its public health agency as an employer of choice. As its recruitment strategy, the agency emphasizes total awards benefits and various work study and training programs.

**Keys to solving the problem:** Providing adequate funding. Expanding public health career awareness opportunities. Offering career progression opportunities to current employees.

**HAWAII**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Hawaii provides additional compensation to occupational classes experiencing worker shortages. The state's plan also entails recruiting and hiring above the minimum rates, and covering moving and travel expenses for some critical-to-fill classes. Other initiatives under consideration include conducting Web-based recruitment, establishing special programs with nursing schools and offering a limited number of exempt positions.

**Keys to solving the problem:** Offering pay and benefits that are in line with the private sector. Providing scholarships to promote education and training in critical occupations.

**IDAHO**



- short-term plan  long-term plan  written proposal

**Keys to solving the problem:** Increasing pay and appreciation for the public work force.

**ILLINOIS**



- short-term plan  long-term plan  written proposal

**Keys to solving the problem:** Providing incentives in addition to higher pay to retain employees. Exploring flexible work schedules, benefits and other means to entice workers to remain in public health. Recruiting in high schools to encourage students to enroll in public health programs and professions.

**INDIANA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Specific program areas within the state’s public health agencies work on plans for recruitment and retention. All plans review and revise minimum qualifications and job descriptions, analyze turnover rates, conduct salary surveys, analyze the available budget and review recruitment strategies. Indiana is looking for opportunities to expand recruiting, including using newsletters to external partners and recruiting on college campuses. Flexible schedules and salary increases for certain job classifications are offered to retain staff. The state is also planning to expand part-time options for its employees.

**Keys to solving the problem:** Marketing state health agency jobs as interesting and vital to health of a community. Promoting public health agencies as a good place to work. Training public health workers, both current employees who need updated skills and employees who are hired with little or no public health background.

**KANSAS**



- short-term plan  long-term plan  written proposal

**Keys to solving the problem:** Increasing salaries and benefits to match the private sector. Increasing the amount that retired employees can work before their benefits are reduced.

**KENTUCKY**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Kentucky is considering restructuring its public health care system.

**Keys to solving the problem:** Improving efficiency through organizational restructuring. Training the work force. Receiving help from other public and private groups.

**LOUISIANA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Louisiana is considering different ways to use pay rules to attract and retain a qualified work force.

**Keys to solving the problem:** Subsidizing higher education. Continuing to improve salary and benefits.

**MARYLAND**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Maryland has made use of online recruiting services such as Monster.com. The state offers recruitment and retention bonuses for certain classifications with traditional recruitment difficulties. The state offers mission-critical bonuses for certain classifications with similar recruitment difficulties.

**Keys to solving the problem:** Anticipating and addressing a human capital crisis through better work force planning.

**MICHIGAN**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Michigan has a multifaceted plan that combines short- and long-term objectives. This plan involves department initiatives for providers in primary care settings to improve access; training and education through collaboration with schools of public health, medicine and allied professions; and collaborating with local health departments to maintain training and recruitment efforts. The state continues to seek a more integrated enterprise approach to public health practice in contrast to the traditional program-based approach to planning activities.

**Keys to solving the problem:** Expanding both internal and external collaboration with other public and private agencies to enhance a broader range of career opportunities for new recruits as well as for retaining the existing source of knowledge, skills and abilities. Continuing collaborative engagement and response to health issues and disparities in particularly vulnerable populations. Implementing population-based approaches to improving health behaviors.

**MINNESOTA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Activities include recruiting internally; participating in job and community fairs and implementing outreach programs; creating alternative advertising and enhancing visibility; educating youth and working with schools and universities; developing local, state and national partnerships; and maintaining relationships with diversity- and disability-related organizations. For the purposes of retaining the existing work force, the state focuses on anticipating future needs for talent; cultivating employees' knowledge, skills and abilities; and enhancing the work environment. Enhancing the work environment often involves workplace climate surveys, performance management, early conflict intervention, employee recognition, diversity council, work life balance resources, mentorship and professional development.

**Keys to solving the problem:** Continuing to work with multiple partners to recruit, develop and retain a diverse, culturally competent work force.

**MONTANA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** Montana has a new pay plan for compensating employee performance. The pay scale varies by the division within the department and depends on the budget. The state public health department, along with local public health agencies, has developed a public health training institute that offers career-long training programs.

**Keys to solving the problem:** Increasing funding. Training for transition planning. Educating legislators about the importance of adequate staffing and infrastructure in the public health system.

**NEBRASKA**



- short-term plan  long-term plan  written proposal

**Keys to solving the problem:** Developing flexible part-time work schedules. Providing appropriate training to new workers. Increasing salaries and providing management training.

**NEW JERSEY**



- short-term plan  long-term plan  written proposal

**Keys to solving the problem:** Sparking career interest in high schools and undergraduate institutions through aggressive marketing of public health professions. Developing a mid-life career change program to optimize attracting professionals leaving one career path into public health. Offering better economic packages for recruitment and retention.

**NEW MEXICO**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The state is offering educational leave with benefits, including payment of tuition and living expense stipends.

**Keys to solving the problem:** Launching health professional career development in elementary schools. Providing levels of support, education and mentoring to students as they progress on to high school and college. Recruiting and retaining health professionals by providing appropriate wages and wage increases, training and other professional development incentives. Working with the Commission on Higher Education, universities and local community colleges to develop incentives and promote financial assistance or reciprocity for service in health professional shortage areas.

**NEVADA**



- short-term plan  long-term plan  written proposal

**New Approaches to Recruitment and Retention:** The state is using a temporary employment agency to hire contract employees.

**Keys to solving the problem:** Increasing recognition of the importance of public health among the general population to enhance interest in the field and increase the applicant pool. Allowing greater remuneration for available job categories in order to increase incentive to work in the field.

**NEW YORK**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The state conducted a survey asking its work units to identify critical positions that would be vacated due to retirement. Managers identified several ways to address the work force shortage issues: succession planning, including mentoring; strengthening continuing education for current employees; encouraging flexible schedules and telecommuting; developing new recognition programs; and providing knowledge transfer training.

**Keys to solving the problem:** Focusing on knowledge transfer strategies. Documenting processes critical for institutional knowledge. Promoting mentoring. Developing effective civil service exams based on critical knowledge, skills and abilities.

**NORTH CAROLINA**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The state is currently working on a plan to address shortages through both short-term and long-term mechanisms. The public health department is recommending career banding and recognition/compensation for scarce skills. The state is also considering implementing compensation when retention and labor market issues occur.

**Keys to solving the problem:** Offering competitive compensation and attractive benefits packages. Creating opportunities for advancement, training and skills enhancement. Balancing workload given many deliverables with limited work force and timelines.

**OKLAHOMA**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The state is developing a plan to address the profiling of the work force, design baseline and ongoing needs assessment surveys, and conduct exit surveys for staff leaving the agency as well as moving from one administrative area to another. The Oklahoma Public Health Leadership Institute, which is a collaboration among the Oklahoma College of Public Health, the University of Oklahoma Health Sciences Center and the Oklahoma State Department of Health, is designed to develop and increase leadership skills of future health managers as they assume responsibility. The state public health department established a new position in 2001 to address recruitment and retention issues. This employee regularly visits nursing schools; writes and implements education assistance policy and guidelines; revises education leave policy; assists in establishing distance learning programs; and conducts targeted recruitment for social workers, health educators and child development specialists. The state intends to launch a public health career promotion program for elementary and middle school students and to begin developing career path plans for nursing and other medical disciplines.

**Keys to solving the problem:** Providing funding necessary to allow compensation and benefits to be competitive with the private sector. Developing and expanding partnerships with education institutions for providing curriculum development, training and internships in health occupations with a shortage of qualified applicants.

**PENNSYLVANIA**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** State public health department personnel have spoken in different venues, such as churches, community meetings, colleges and universities, and elementary and secondary schools to promote public health careers.

**Keys to solving the problem:** Educating policy-makers to the importance of public health professional organization advocacy.

**RHODE ISLAND**

- short-term plan  long-term plan  written proposal



**Keys to solving the problem:** Planning strategically for reductions in work force due to budget constraints.

**SOUTH CAROLINA**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The state is conducting targeted recruiting, establishing reward and recognition programs, and allowing alternative work schedules and telecommuting possibilities. The state is also offering health insurance for part-time employees.

**Keys to solving the problem:** Promoting education and training opportunities to grow current staff. Ensuring adequate state funding for salaries. Creating a positive work environment through regular communication with staff and using flexible work options. Offering part-time employment to retirees. Building capacity through mentoring.

**SOUTH DAKOTA**

- short-term plan  long-term plan  written proposal



**Keys to solving the problem:** Waiting for the supply of workers in shortage areas to catch up with the demand.

**TENNESSEE**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** Although a formal plan is not currently in place, various efforts are currently underway, including a work force development project with state universities that will allow public health employees to seek health-related certificates through Web-based courses. Also, the department created a Fair Employment Practice Advisory Committee charged with increasing diversity in the workplace by designing in-service training classes for managers and supervisors. The classes will include awareness, proper interviewing and selection technique components.

**Keys to solving the problem:** Improving and increasing recruitment efforts. Providing competitive salaries.

**TEXAS**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The state implemented a broad range of strategies, including recruitment and retention bonuses, flexible work schedules, special awards and recognitions, and training and development for current staff.

**Keys to solving the problem:** Clearly defining and communicating the role of public health to policy-makers. Enforcing responsibility and accountability at all levels throughout public health agencies. Basing compensation and rewards on the level of mastery of an agreed upon set of competencies and skills. Marketing public health to potential employees as a commitment and a career.

**UTAH**

- short-term plan  long-term plan  written proposal



**Keys to solving the problem:** Providing salaries to public health employees that are competitive with compensation in the private sector. Offering attractive retirement, medical and other benefits at low costs to the employees. Creating incentives for long-term employment service.

**VERMONT**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** In order to attract more nurses, the state health department designed a recruitment plan for targeted ads in professional journals that emphasize the availability of student loan repayment for public health nurses. The agency reviews and emphasizes the merit and recognition program to consistently reward strong performers with a goal towards increasing retention. The agency also established a work force development unit to conduct department-wide needs assessment and drafted individual development plans to link employees to needed training.

**Keys to solving the problem:** Moving pay ranges quickly to attract and retain employees when market shrinks for a particular job class. Offering greater flexibility with incentives, merit and recognition programs. Providing more state support for professional growth. Pushing for broader public awareness of careers within public health. Establishing partnerships with schools of public health, nursing and health sciences.

**WASHINGTON**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The state is seeking to identify better recruitment practices and outreach sources, focusing on nontraditional education and other applicant pool resources.

**Keys to solving the problem:** Offering competitive pay plans to compete with the private sector and large urban agencies. Increasing the respect for public service jobs and career paths. Identifying job requirements and focusing on core competencies directly related to accomplishing the identified job duties and responsibilities. Increasing the effectiveness of marketing public health as a reliable and dependable career choice. Focusing on nontraditional sources of candidates. Increasing outreach to youth and other potential future employees who haven't been exposed to public health as a career opportunity.

**WEST VIRGINIA**

- short-term plan  long-term plan  written proposal



**New Approaches to Recruitment and Retention:** The West Virginia Office of Personnel Services has established a Succession Planning and Workforce Development Task Team, which first met in January 2004. The team reviews the department's current effort and generates recommendations relative to succession planning and work force development issues. The discussion encompasses recruitment, selection and training processes for Department of Health and Human Resources.

**Keys to solving the problem:** Ensuring succession planning and work force development. Developing core curricula, continuing education and distance learning capability to protect the health of the public. Designing specific initiatives that target career development ladders.

## Endnotes

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- <sup>2</sup> James B. Carroll and David A. Moss, "State Employee Worker Shortage: the impending crisis," *TrendsAlert*, The Council of State Governments, October 2002. James Carroll and David Moss, 4.
- <sup>3</sup> Twenty-eight states responded to the question.
- <sup>4</sup> James Carroll and David Moss, 3.
- <sup>5</sup> James Carroll and David Moss, 4.
- <sup>6</sup> James Carroll and David Moss, 4.
- <sup>7</sup> National Association of County and City Health Officials (NACCHO), *Local Public Health Agency Infrastructure: A Chartbook* (Washington, D.C.: National Association of County and City Health Officials, October 2001) <[http://www.naccho.org/files/documents/chartbook\\_workforce49-59.pdf](http://www.naccho.org/files/documents/chartbook_workforce49-59.pdf)> (6 October 2003).
- <sup>8</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professionals, National Center for Health Workforce Information and Analysis, *The Public Health Work Force: Enumeration 2000*, Dec. 2000, 25-26.
- <sup>9</sup> Katherine Barrett, Richard Greene and Michele Mariani, "A Case of Neglect: Why Health Care Is Getting Worse, Even Though Medicine Is Getting Better," *Governing* (February 2004): 22-79. <<http://www.governing.com/gpp/2004/intro.htm>> (15 January 2004).
- <sup>10</sup> U.S. General Accounting Office, *Nursing Workforce: Emerging Nurse Shortages Due to Multiple Factors*, Washington, D.C., 2001.
- <sup>11</sup> U.S. General Accounting Office, *Nursing Workforce: Emerging Nurse Shortages Due to Multiple Factors*, Washington, D.C., 2001.
- <sup>12</sup> *The Public Health Work Force, Enumeration, 2000*, 25-26.
- <sup>13</sup> *The Public Health Work Force: Enumeration 2000*, 23.
- <sup>14</sup> *National Assessment of Epidemiological Capacity in Public Health: Findings and Recommendations*, Council of State and Territorial Epidemiologists, March 2003, 13.
- <sup>15</sup> *National Assessment of Epidemiologic Capacity*, 6.
- <sup>16</sup> *Public Health Laboratory Issues in Brief: Bioterrorism Capacity*, Association of Public Health Laboratories, August 2003.
- <sup>17</sup> *The Public Health Work Force: Enumeration 2000*, 25.
- <sup>18</sup> *Public Health Laboratory Issues in Brief*, 3.
- <sup>19</sup> *Public Health Laboratory Issues in Brief*, 4.
- <sup>20</sup> *Public Health Laboratory Issues in Brief*, 3.
- <sup>21</sup> *Public Health Laboratory Issues in Brief*, 4.
- <sup>22</sup> *Health, Environment and Work*, an online resource <<http://www.agius.com/hew/index.htm>> (1 March 2004).
- <sup>23</sup> *The Public Health Work Force: Enumeration 2000*, 24.
- <sup>24</sup> *The Public Health Work Force, Enumeration 2000*, 24.
- <sup>25</sup> *Public Health's Infrastructure: a Status Report*, Centers for Disease Control and Prevention, Department of Health and Human Services. <[http://www.phppo.cdc.gov/documents/phireport2\\_16.pdf](http://www.phppo.cdc.gov/documents/phireport2_16.pdf)> (13 January 2004).
- <sup>26</sup> *The Future of the Public's Health in the 21<sup>st</sup> century*, Institute of Medicine, 2003, National Academies of Sciences Press, 5.
- <sup>27</sup> *National Assessment of Epidemiological Capacity*, 2.
- <sup>28</sup> Kristine Gebbie, Jacqueline Merrill and Hugh H. Tilson, "The Public Workforce; without a competent workforce, a public health agency is as useless as a new hospital with no health care workers," *Health Affairs*, November/December 2002.
- <sup>29</sup> Kristine Gebbie, 13.
- <sup>30</sup> Katherine Barrett, 6.
- <sup>31</sup> Marilynn Marchione, "Wisconsin ill-prepared for a bioterrorism attack, HHS says" Milwaukee Journal Sentinel, November 1, 2002. <<http://www.jsonline.com/Alive/news/nov02/92501.asp>> (17 February 2004), and Illinois Department of Public Health, "Illinois First State to Be Awarded Highest Rating for Bioterrorism Preparedness," Press Release, 23 October 2003. <<http://www.idph.state.il.us/public/press03/10.23.03b.htm>> (23 January 2004).
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