# West Virginia State Health Plan
## *Public Health*

## I. BACKGROUND

Public health services and practices, broadly defined as communicable disease prevention and control, environmental health protection, and community health promotion, are the foundation upon which personal health rests. The large majority of the improvement in individual and community health and well-being over the last two centuries results from improved sanitation, nutrition, and related public health measures and practices, rather than from the direct provision of medical care. Nevertheless, only a very small fraction of the health care dollar, less than 3% nationally in recent years, is spent on public health activities. The percentage in West Virginia is even lower, less than 1% of total expenditures in recent years. This economic imbalance is ironic. It is not clear whether the extraordinary divergence between spending on personal medical care and public health programs and services results from a conscious, but erroneous, belief that personal medical care is more valuable and productive or, as seems more likely, from the interaction of entrenched economic, technological, and social forces.

Persistent, significant variation in personal and community health status within populations with virtually universal health insurance coverage is strong testimony to the fundamental importance of public health principles and practices. Access to personal health services alone does not, perhaps cannot, replace a sound public health infrastructure that benefits everyone, particularly those at high risk of adverse health effects associated with negative social, economic, and environmental factors. Numerous studies suggest that the direct provision of medical care in and of itself is inadequate to maintain or improve overall community health status. Some analyses of national mortality data suggest that about half of all premature deaths result from underlying causes and circumstances that are not readily remedial through the provision of medical services. These causes tend to relate to diet, level of exercise, use of tobacco and drugs, personal sexual and other risk behaviors, and exposure to a handful of other social and environmental stressors. Examination of the 10 leading causes of death in the U. S. by the Centers for Disease Control and Prevention (CDC) during the late 1970s and early 1990s supports the view that most premature death results from personal risk exposure, environmental stressors and risk factors, and human biology. The researchers concluded that less than one premature death in 10 could have been prevented through improvements in medical care and the delivery of personal health services. (Lasker, *Medicine & Public Health: the Power of Collaboration)*

These findings suggest that a sound public health infrastructure capable of addressing basic community health issues is essential if personal and community health are to be maintained, much less improved. Given the limits of the direct provision of medical care, the proper province of public health is potentially great depending upon how broad one believes the role of government should be. There appears to be general consensus that public health involves, at a minimum, communicable disease prevention and control, environmental health protection and surveillance, and community health promotion. Beyond this, there are a number of potential, but as yet not fully articulated, roles the public sector could play in a more fully integrated health care system. Depending on how the health care market matures, particularly with regard to the shift to greater reliance on managed care, there may well be a far larger role for public health services and programs in the collection, analysis, and dissemination of health and health-related information and data.

## II. SYSTEM ASSESSMENT

### A. Context

Most public health services in West Virginia are delivered by the 54 local health departments supported by the West Virginia Bureau for Public Health. All are organized under one of three provisions of the state code, have considerable autonomy, and are individually controlled by a local governing board. Collectively, they have provided a wide array of services. Recently more than 60 distinct services were available in one or more locations statewide. Collectively, the local departments reported a total of 1,021,238 patient/client encounters in fiscal year 1998. Total funds available for local public health services health are projected to be nearly $41 million in FY 99. The majority of these funds, approximately $21 million, come from local (city and county) sources. Slightly less than 19%, about $7.63 million, is state aid. The remaining 31% comes from a combination of other sources, largely client fees for services rendered and grants.

Services provided locally vary widely, depending upon the resources available. Local public health department budgets range from less than $150,000 to nearly $4.0 million, with from as few as three to more than 60 staff. Low population density and the associated scalar economies make it difficult to offer the full array of services statewide. Table PH-1 compares recent local health department budgets, staff levels, and overall service volumes. Although some are able to provide a number of clinical services, the large majority of contacts are for traditional core public health services. Immunizations and vaccinations alone account for more than 20% of all contacts. Tuberculosis screening, family planning services, sexually transmitted disease prevention and surveillance, and environmental sanitation and protection services account for about 50%. Home health services, offered in fewer than one-third of the sites, account for about 10%.

As is the case in many states, the role and functions of West Virginia's local health departments are changing. It is now state policy to encourage local departments to focus on basic community health functions and services, rather than on providing personal health care. Basic community health services, as defined by current policy, are those that are mandated by state law and regulations, are community rather than individual based, and are acknowledged to be essential to protect the public health. Four categories of health services have been identified as falling within this policy definition:

- communicable and infectious disease prevention and control services;
- environmental protection activities;
- community health needs assessment and reporting, and
- cooperative public-private community health promotion activities.

Increasingly, state support of local health departments will be focused on these areas.

Given scarce resources, the relatively high unit cost of providing public health services in sparsely populated rural areas, and the shift of state focus and support to core public health functions, only limited clinical programs and services can be provided. Historically, a significant amount of local health department revenue came from fees charged for personal health services rendered. Consequently, both the shift in policy and market reform pose a substantial risk to these service programs. Given that the local departments have served many of those most in need, any reform or integrated system formation should take fully into account their historic value and role in the public health system, and assure that those served by them are not forgotten.

### B. Public Health in Transition

The West Virginia Public Health in Transitions program grew out of the cooperative effort to develop the application filed for a Turning Point Project grant (a joint grant program from the Robert Wood Johnson Foundation and the W. K. Kellogg Foundation) in 1997. The grant sought was not awarded, but those involved have taken advantage of the work done to begin to identify and address the fundamental problems facing the public health system. They renamed the effort the

Public Health Transitions Project and organized to begin dealing with what was quickly identified as a statewide public health system crisis.

The basic problem is economic, compounded by a changing health care market. Financial support from local governments, school systems, and other local entities has decreased in recent years.This loss was compounded by provisions of the Balanced Budget Act of 1997 that resulted in substantially less revenue to local health departments for providing home health services. In many cases, these revenues were essential to help cover overhead costs. Consequently, some essential local health department staff were dismissed (reduction in force) in 1998, and health departments in three counties required emergency funds to sustain operations that year.

A survey of local health departments in early 1998 found a majority of them to be in dire economic straits. Although no quantitative or analytical measures were applied consistently, agencies and departments covering 40 of the 55 counties declared themselves to be in economic crisis. The principal reasons cited were:

- historical, gradual reduction in both state and local support;
- Medicare program payment changes, reducing home health revenues, and
- reduced payments stemming from increased reliance on managed care, particularly among Medicare and Medicaid patients moved to managed care.

These self-assessments appear to have been generally accurate. Analysis of FY 97 operating statistics found that monthly expenses exceeded revenues in nearly half (23) of the local departments, and 25 showed economic deterioration between FY 96 and FY 97.

Reduced Medicare payments for home health services is the most serious, and the more easily measured, problem faced by the local departments. About one-third of the local departments provide home health services. They will lose nearly $5.0 million annually in Medicare payments as a result of the reimbursement changes, which accounts for over 12% of the total local health departments' annual budgets.

Legislative support for the Transitions Project has been strong. A legislative subcommittee was established to respond to the crisis and oversee the state response. Approximately $4.3 million in additional state funds (transition funds) were appropriated for FY 99, and again for FY 2000, to help deal with the problem. Consequently, no local health departments have been forced to close. All now have balanced budgets, at least temporarily. Reports indicate that the transition monies, consistent with the shift to basic core public health services, are being used as follows:

- environmental health protection activities and services, roughly 50%;
- communicable disease prevention and control, roughly 20%;
- community health promotion efforts, roughly 15%, and
- administration and overhead, roughly 15%.

In addition to the state appropriation, more than $300,000 in additional local funding statewide has been generated under the Transitions Project.

## III. PROBLEM STATEMENT

Public health services are in transition nationwide. Eroding state and local economic support for public health programs, Medicare program payment reforms, and market changes resulting from the rise of managed care practice patterns and payment schemes, particularly among Medicaid program enrollees, are combining to place great stress on all public health delivery systems. This is especially true in West Virginia, where a comparatively large percentage of the population is rural, poor, uninsured, and aged and therefore more likely to be dependent on public health services. It remains to be seen what the shift in policy to focus narrowly on basic public health services, rather than a more balanced mix of public and

personal services and activities, will mean for those most dependent on public services. It does suggest that policymakers will need to ensure that alternative sources of care are available to this substantial and growing at-risk population.

West Virginia's public health financial crisis, and the resulting Transitions Project, are motivating a critical examination of the public health system. In many respects, both the examination and the underlying problems found are similar to the experience elsewhere. Changes in reimbursement, particularly those resulting from Medicare and Medicaid program changes and from increasing reliance on managed care practice and payment schemes, have undercut the economic support for the public health clinical services that historically have helped sustain local public health departments. With these changes, policymakers are faced with deciding the value and role of public health programs. The West Virginia Transitions group is grappling with a number of difficult questions, including:

- defining and agreeing upon a set of basic, mandated public health services and activities that will need to be supported with public monies;
- determining which public health services beyond those mandated should be provided and how they will be financed;
- determining how needed personal clinical services, if offered, can be provided and how they will be financed, and
- developing performance-based standards and benchmarks to measure the success of the rejuvenated public health delivery system and the return on the public investment.

These activities are already under way.

## IV. ANALYSIS

Because the problems West Virginia is facing are common to many states, there are a number of examples elsewhere that suggest how they might be addressed. The Turning Point Project, the joint W. K. Kellogg-Robert Wood Johnson program to which West Virginia applied unsuccessfully, is perhaps the most notable effort now under way that is focusing on reforming the public health care system. It is currently supporting 14 state and 41 community state/local partnerships that are exploring the question of how to transform the public health infrastructure to meet changing public needs and expectations. The results of these efforts, now about a year old, should be helpful to everyone working to maintain the viability of and improve public health services. Progress and notable findings of the Turning Point partnerships may be followed in *Transformations in Public Health*, the project's recently established quarterly publication.

Complementary studies that may be useful in guiding the evolution of the West Virginia public health system include the survey of state and local public health organizational and operational structures nationwide being conducted by the National Association of County and City Health Officials (NACCHO), the review of the status and adequacy of state public health legal statutes nationwide being completed under the Turning Point initiative, and the work currently being done by the Institute for the Future to identify potential alternative public health system scenarios. West Virginia's public health structure fits into the "decentralized" model, which permits substantial local involvement and control, and implies local economic support. This suggests that there should be ample opportunity for local communities, provider and consumer groups alike, to influence directly changes in the local public health system structure and operations. Those faced with determining the future of public health care in West Virginia may find the results of these three ongoing studies instructive. All can be followed closely, at relatively little expense, online at various Internet websites (see Bibliography).

Accommodating the changes in Medicare and Medicaid payments resulting from the Balanced Budget Act of 1997 and the market changes that are likely to come with the growth of managed care, without shredding the "safety net" services that public health represents for many West Virginians, must be the overriding objective of those making public health policy. This suggests that the public health system must necessarily be more fully integrated into the overall health care system. The divergence between the public health and private health care delivery systems, which has grown steadily for many decades, needs to be bridged if the health and well-being of the community, especially those dependent upon public services, is to be preserved.

The growth in managed care presents opportunities as well as challenges for the public health sector. Managed care principles, properly applied, emphasize preventive care and, implicitly if not explicitly, population-based community health services. With a fundamental economic interest in keeping its enrolled population as healthy as possible, managed care has an interest in providing preventive services that the private medical sector has had few incentives to promote. Likewise, diagnostic and treatment services that are essential to assuring the general health of the community are of notable value to those at risk for providing medical care to a defined population. They could, for example, be at considerable financial risk were there to be a communicable disease outbreak. Just as public policy needs to ensure that immunization is a covered benefit under managed care plans if it is to assure that aggregate immunity levels are sufficiently high to protect the population at large, managed care plans need to be certain that they can document that the immunity levels are high and that their enrolled population is not put at unnecessary or unacceptable risk. There is considerable evidence that simply making immunizations available is not adequate to ensure high community immunity levels. Immunization levels have been found to be low in managed care plans, even among children with multiple medical visits per year and where there is no copayment for immunizations. This suggests that a coordinated private-public effort, a *de facto* partnership, is needed. Public health departments need to explore the possibility of contracting with managed care organizations to provide these and related preventive services.

Public health methods and techniques are becoming more valuable to the health system generally. Managed care in all of its variations involves the element of assuming financial risk in providing needed services to a defined (enrolled) population: to make available an agreed-upon set of services and benefits at an agreed-upon (predetermined) price for a defined period of time. Assuming economic risk means that the organization, network, or group must necessarily try to anticipate or predict health care needs (or at least expressed demand) accurately and find cost-effective ways of providing the needed care. The economic well-being of these entities thus becomes increasingly dependent upon population-based health and health-related information and upon the effective use of public health planning, education, and service delivery strategies. Public health departments that have or can develop skills and experience in these areas may be able to market their expertise to managed care organizations and health care networks. West Virginia's local health departments are already part of regional, multifacility networks

## V. ACTION STEPS

There is broad recognition of the problems facing the public health system in West Virginia. The best indication of this is the Public Health Transitions Project and the support it has generated. Emergency transition monies have been made available for two budget years, a policy decision to focus on core population-based public health functions has been made, and several knowledgeable work groups have been formed to devise solutions and longer-term plans. A 44-member state level advisory board has been established to assist the Bureau for Public Health develop a transition plan to more fully integrate public health services into the state's health care delivery system. The Bureau for Public Health has established two expert working subcommittees, one focusing on basic public health services and the other on local health reporting. Collectively, these groups are charged with:

- evaluating the current mission of the public health system in West Virginia;
- defining, operationally, core public health functions and the essential public health services required to meet these functions;
- delineating performance-based standards;
- assessing the organizational, financial, and service capabilities of each local health department;
- determining each county's interest and ability in providing and maintaining essential public health services;
- developing funding options for local- and state-level public health services, and
- reviewing the state public health code and recommending revisions where necessary.

Once complete, these efforts are likely to address more fully than has been the case heretofore the basic issues surrounding public health services in West Virginia.

Many of the chronic conditions (and the associated high death rates) that beset large numbers of West Virginians (e.g., heart disease, lung cancer, stroke, diabetes) are responsive to public health intervention and control efforts. Given the state's demographic profile, the high prevalence of chronic conditions, the relatively high levels of negative health behaviors reported in repeated surveys, and the policy decision to devote public health energies and resources on core public health functions and activities, a focus on public health education may be appropriate. Consideration should be given to ensuring that education efforts are systematically integrated into all health programs and services and that more extensive and consistent efforts are made to expand the health curriculum in the education system. This would include at a minimum:

- expansion of the school health curriculum to provide a full K-12 program in healthy lifestyle, disease prevention, and community health promotion training and education;
- use of tobacco settlement and tax revenues in dedicated educational efforts among young children and their families to combat the high use levels of cigarettes and smokeless tobacco found statewide, and
- ensuring that managed care plans and integrated health care delivery systems and networks incorporate appropriate health education services either directly in their operations or indirectly through affiliations or contracts with public health departments or similar entities.

Tobacco use education at all levels could prove particularly beneficial, given West Virginia's unusually high cardiac, cancer, and chronic obstructive pulmonary disease death rates. Recently published data suggest that health and economic returns from reduced tobacco use are substantial and long-term. New, more complex simulation models based on analyses of data between 1975 and 1987 suggest that overall death rates would be about 11% lower in 20 years if everyone quit smoking. (L. Russell et al., AHCPR *Research Activities*, June 1998). These data suggest that any reduction in tobacco use will yield substantial immediate and long-term health benefits. Effective tobacco use reduction programs in West Virginia would be particularly beneficial

Health care networks, managed care plans, and other integrated delivery systems should be encouraged to work with the Public Health Transitions Project to explore practical ways in which private and public health systems and functions can work in cooperation to the mutual benefit of the public. Particular attention should be given to finding ways to ensure that the needs of those who have depended upon public health services will be met as public health services are focused more narrowly on core population-based services.

## VI. POTENTIAL SOLUTIONS

Based on the steps taken to date, and on announced stated intentions, the West Virginia Bureau for Public Health's Public Health Transitions Project appears to be on track in dealing with the underlying problems confronting the public health system. Given that the difficulties are grounded in limited resources and a changing marketplace, the primary challenge will be to devise acceptable ways to ensure that public health services and functions are integrated more fully and effectively in the general health care delivery system. This should include, among other things, direct public health interaction (contracts, subcontracts) with private health care providers, especially managed care plans. It also implies that health policymakers may need to encourage the private sector to coordinate their efforts with those of the public sector and to incorporate public health methods and approaches where possible.

Public health officials should follow and take advantage of what will be learned from the large-scale efforts now under way elsewhere to transform the public health system. Activities that may be of particular value include:

- Turning Point: Collaborating for a Century in Public Health, the public health reform initiative sponsored by the W. K. Kellogg and Robert Wood Johnson foundations;

- the Community Health Status Indicators Project (CHSI), the U.S. DHHS Health Resources and Services Administration (HSRA) supported project being undertaken by the National Association of State and Territorial Health Officials (ASTHO) and the Public Health Foundation (PHF) (see PH-2, CHSI Draft Working Document);
- the National Association of County and City Health Officials (NAACHO) nationwide study of the public health infrastructure now under way and supported by the Robert Wood Johnson Foundation, and
- the model state public health laws and privacy legislation now being developed in the Turning Point Project and by the Council of State and Territorial Epidemiologists with Centers for Disease Control and Prevention support.

All can be followed by newsletter and online (see Bibliography).

## VII. RECOMMENDATIONS

Much is at stake in the "transition" of West Virginia's public health system. It is evident that alternative ways will have to be found to provide many of the safety net personal health services that the public system historically provided to many communities. And it is uncertain how long state supplemental transitional monies will be available to support basic public health functions. Given these circumstances, the expected growth in managed care, particularly among Medicare and Medicaid enrollees, and other likely changes in these public payment programs, the future stability of the public health system appears to be dependent on how well and how fully it can be integrated into the health care systems of each county and community served. Everyone, those needing and those providing care alike, has an interest in ensuring that the transition is to a more stable, integral part of the state's health care delivery system.

Spending on public health services, less than 1% of total spending statewide, is disproportionately low and inadequate to meet legitimate, identified community and personal safety net needs. Although base-level transition funds are now available to all local departments, total funds vary widely across the state. Determining how to finance public health services is one of the key tasks of the Public Health Transitions Project. Consideration should be given to strategies that:

- encourage managed care plans, health care networks, and other private entities to contract with public health departments to provide basic preventive and primary care services such as immunizations, home health care, and screening services, and
- ensure that private health care entities participate in and help support (defray the costs of) two of the four core public health functions identified to date by the Transitions Project, namely conducting and reporting community needs assessments and cooperative public-private community health promotion activities.

## VIII. FEASIBILITY

There is a substantial body of literature and experience that demonstrate the value of a stable, well-functioning public health system. It is widely recognized that historically public health services have played an unusually important role in the West Virginia health care system, and that significant disruption in that system would be costly. The initial steps of organizing to deal with the problems facing the public health system are already well under way. Given the demography, health status, and economic conditions across the state, all sectors of the health care market have an interest in ensuring that the public health system remains sound. Should it not, operating costs in all sectors would be likely to rise sharply, without offsetting increases in revenue.

Because everyone has a vested interest in avoiding the collapse of the public health system, the key to resolving equitably the problems faced may lie in ensuring that all parties have a role in deciding what steps are to be taken. Policymakers may want to ensure that all stakeholders are strongly encouraged to participate.

## IX. ACCOUNTABILITY

Accountability as used here means that all interested parties accept, or at least acknowledge, the following:

- the public health infrastructure is fragile and subject to collapse in some communities unless rescued;
- failure of the public health system would reduce access to basic care in many communities and raise aggregate health care costs generally;
- failure of the system would place an added, perhaps unbearable, burden on the private health care system in many communities;
- both the economic and social costs of transforming the public health system are likely to be considerably less than allowing it to fail, with the hope or expectation that market forces will ensure that public need is met equitably;
- recent and ongoing changes in the health care system place a premium on cooperation, rather than competition, among both private and public services, and
- public officials are responsible for assuring not only that all stakeholders have the opportunity to participate in deciding how to resolve public health system problems but also for ensuring that all participate in meeting legitimate community needs.

## X. ISSUES FOR THE FUTURE

Given the critical role it is now playing, it is largely the responsibility of the Public Health Transitions Project to identify critical issues that must be addressed and establish a timetable for addressing them. Some of that has already been done, and the work continues apace. Important considerations that need to remain in the forefront of the effort bear repeating, namely:

- a comprehensive, holistic view of the health care system is necessary if the value of the public health system is to be fully appreciated;
- the public interest, and equity among those providing health services, are paramount values that need to be incorporated in deliberations and solutions, and
- cooperation and collaborative action, both within the private healthcare sector and between the private and public sectors, are likely to be far more productive for West Virginia than costly competition for a larger share of an aging and shrinking market.

In addition, given the critical importance of public health system principles and practices being more fully integrated into the general health care system, consideration should be given to expanding the planning and marketing capabilities of the public health system as quickly as possible.

**Table PH-1**
**Local Health Department Operations**, FY98

| COUNTY/ DEPARTMENT | POPULATION | BUDGET | FTE STAFF | SERVICE CONTACTS | CONTACTS PER CAPITA | EXPENSE PER CONTACT |
|---|---|---|---|---|---|---|
| BARBOUR | 15,699 | 1,131,470 | 27 | 24,520 | 1.6 | 46.1 |
| BERKELEY | 29,400 | 764,248 | 14 | 15,810 | 0.5 | 48.3 |
| BOONE | 25,870 | 597,207 | 15 | 29,433 | 1.1 | 20.3 |
| BRAXTON | 12,998 | 226,698 | 5 | 5,425 | 0.4 | 41.8 |
| BROOKE | 26,992 | 373,001 | 6 | 12,563 | 0.5 | 29.7 |
| CABELL-HUNTINGTON | 96,827 | 1,824,717 | 50 | 44,241 | 0.5 | 41.2 |
| CLAY | 9,983 | 1,488,685 | 56 | 14,962 | 1.5 | 99.5 |
| DODDRIDGE | 6,994 | 481,130 | 10 | 12,148 | 1.7 | 39.6 |
| FAYETTE | 47,952 | 334,706 | 6 | 4,133 | 0.1 | 81.0 |
| GILMER* (LEWIS) | 7,669 | 185,519 | 3.6 | 0 | 0.0 | NA |
| GRANT | 10,428 | 571,128 | 22 | 15,532 | 1.5 | 36.8 |
| GREENBRIER | 34,693 | 1,414,982 | 31 | 11,574 | 0.3 | 122.3 |
| HAMPSHIRE | 16,498 | 267,921 | 6 | 17,476 | 1.1 | 15.3 |
| HANCOCK | 35,233 | 262,065 | 5 | 10,799 | 0.3 | 24.3 |
| HARDY | 10,977 | 248,211 | 5 | 14,241 | 1.3 | 17.4 |
| HARRISON- CLARKSBURG | 69,371 | 2,402,751 | 49 | 44,617 | 0.6 | 53.9 |
| JACKSON | 25,938 | 992,350 | 28 | 11,974 | 0.5 | 82.9 |
| JEFFERSON | 35,926 | 736,335 | 17 | 36,007 | 1.0 | 20.5 |
| KANAWHA-CHARLESTON | 207,619 | 3,659,906 | 64 | 51,121 | 0.2 | 71.6 |
| LEWIS | 17,223 | 1,250,816 | 25 | 31,384 | 1.8 | 39.9 |
| LINCOLN | 21,382 | 225,614 | 6 | 10,965 | 0.5 | 20.6 |
| LOGAN | 43,032 | 418,312 | 10 | 12,048 | 0.3 | 34.7 |
| MARION | 57,249 | 1,372,733 | 25 | 23,014 | 0.4 | 59.6 |
| MARSHALL | 37,356 | 527,021 | 13 | 15,397 | 0.4 | 34.2 |
| MASON | 25,178 | 360,484 | 6 | 92,474 | 3.7 | 3.9 |
| MCDOWELL | 35,233 | 287,406 | 11 | 9,449 | 0.3 | 30.4 |
| MERCER | 64,980 | 872,314 | 13.6 | 11,417 | 0.2 | 76.4 |
| MID-OHIO VALLEY** | 132,891 | 3,312,793 | 71 | 51,573 | 0.4 | 64.2 |
| MINERAL | 26,697 | 425,609 | 10.8 | 13,106 | 0.5 | 32.5 |
| MINGO | 33,739 | 295,566 | 7 | 10,233 | 0.3 | 28.9 |
| MONONGALIA | 75,509 | 3,790,715 | 28 | 41,464 | 0.5 | 91.4 |
| MONROE | 12,406 | 112,544 | 3 | 9,254 | 0.7 | 12.2 |
| MORGAN | 12,128 | 227,004 | 6 | 4,919 | 0.4 | 46.1 |
| NICHOLAS | 26,775 | 1,721,486 | 41 | 30,375 | 1.1 | 56.7 |
| WHEELING-OHIO | 50,871 | 988,693 | 21 | 14,085 | 0.3 | 70.2 |
| PENDLETON | 8,054 | 287,986 | 5.6 | 9,182 | 1.1 | 31.4 |
| POCAHONTAS | 9,008 | 167,042 | 4 | 9,770 | 1.1 | 17.1 |
| PRESTON | 29,037 | 347,511 | 6 | 15,305 | 0.5 | 22.7 |
| PUTNAM | 42,835 | 614,717 | 11 | 4,057 | 0.1 | 151.5 |
| BECKLEY- RALEIGH | 76,819 | 850,606 | 15.4 | 19,099 | 0.2 | 44.5 |
| RANDOLPH | 27,803 | 1,129,697 | 36.8 | 25,563 | 0.9 | 44.2 |
| SUMMERS | 14,204 | 206,269 | 4 | 5,559 | 0.4 | 37.1 |
| GRAFTON-TAYLOR | 15,144 | 1,109,538 | 24 | 7,162 | 0.5 | 154.9 |
| TUCKER | 7,728 | 134,522 | 3 | 4,233 | 0.5 | 31.8 |
| UPSHUR-BUCKHANNON | 22,867 | 249,150 | 6 | 24,483 | 1.1 | 10.2 |
| WAYNE | 41,636 | 680,985 | 19 | 10,747 | 0.3 | 63.4 |
| WEBSTER | 10,729 | 200,538 | 6 | 6,036 | 0.6 | 33.2 |
| WETZEL-TYLER | 29,054 | 637,060 | 12 | 9,975 | 0.3 | 63.9 |
| WYOMING | 28,990 | 211,609 | 3 | 13,077 | 0.5 | 16.2 |
| TOTAL | 1,763,624 | 40,979,370 | 872.8 | 921,981 | 0.5 | 44.4 |

***Services in Gilmer County are 'contracted out' to Lewis County. Service counts included in Lewis County counts.**
****Mid-Ohio Valley serves Calhoun, Pleasants, Ritchie, Roane, Wirt, and Wood counties. Mid-Ohio Valley WIC Program also serves Jackson, Mason, and Gilmer counties.**
**Source: Local Health Department Operating Policies, West Virginia Bureau for Public Health, FY98**

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*West Virginia Health Profiles: County Health Profiles*. Charleston, WV: Office of Epidemiology and Health Promotion, West Virginia Bureau for Public Health, June 1997.

*West Virginia Local Health Departments: Budget and Operating Summaries.* Charleston, WV: West Virginia Bureau for Public Health, FY 98-99.

## World Wide Web Sites

Quality Indicators Project, Healthcare Cost and Utilization Project, Agency for Health Care Policy and Research www.ahcpr.gov/data/hcup/qifact

National Forum for Health Care Quality Measurement and Reporting www.uhfnyc.org/intro/qfpc.htm

Quality Measurement Advisory Service www.qmas.org