

WEST VIRGINIA STATE HEALTH PLAN

Public Health

Section One: West Virginia Public Health System

I. BACKGROUND

The United States public health system is experiencing a rapid and dramatic transition. The vastly effective control of crowd diseases, brought about by the growth of cities and the urban populations, such as polio, smallpox, cholera, plague, diphtheria, and tuberculosis, brought the science of public health into the forefront in the last half of the nineteenth century. Since then, the science and the public health system have been adjusting to address newly identified public health concerns. Better sanitation, safe food delivery, safe water supplies, population-based education programs about good nutrition, infectious disease identification and reporting, cancer screening, dental care, child health, and programs to improve the chances of having healthy babies, prevention and control of chronic diseases, and concerns with incidences of weapons of mass destruction are current examples of public health in action.

Probably less well known to the general public is the public health responsibility to assure a quality health care system. This is done through setting standards, licensure and certification processes, conducting regular inspections, and following up on complaints by citizens. Public health has this jurisdiction over all health and medical facilities in West Virginia. Hospitals, nursing homes, skilled nursing facilities, and laboratories are examples of these facilities. Boards for licensing physicians, nursing home administrators, hearing aid dealers, and sanitarians also come under public health jurisdiction.

These are the programs of a preventive health system, a system whose mission is first and foremost to keep the population as healthy and injure-free as possible.

All across the country, including West Virginia, the financial resources to support the preventive health system did not grow as rapidly as have the amounts needed for capably caring for the rapidly growing U.S. population. In the 1960s health care dollars aimed at specific categorical programs began to dictate the focus and delivery of public health. Local public health departments were called upon to delivery personal medical care services, not only to the general public to prevent outbreaks and protect against infectious and communicable diseases but also to deliver medical care to the indigent. Eventually, with the availability of Medicare and the federal-state partnership Medicaid Program, the local health departments were able to offset the lack of funds for population-based services with reimbursement for direct personal medical care. In the late 1990s those avenues of funds began to quickly dry as managed health care called for all personal medical services to be driven by a primary care provider (PCP). Many local health departments in West Virginia quickly saw loss of revenue. Like most states, the state-level bureaucrats in public health and in the state's Medicaid program found difficulty coming together on major policy issues.

In the late 1980s public health officials became concerned that the U.S. public health system may not be adequately equipped to handle chronic disease prevention and new emerging infectious diseases, as well as respond to catastrophic natural or man-made disasters and threats from weapons of massive destruction. In 1988 the Institute of Medicine (IOM) conducted a major study of the U.S. public health system. West Virginia was one of several states selected for an in-depth review. The resulting report, *The Future of Public Health* found serious deficiencies within the system. The premise upon which the study was undertaken was proven to be accurate. The public health system had not been upgraded to equip its professionals and its infrastructure to handle emerging public

health responsibilities. To strengthen the system, significant improvements were needed at every level of government.

Since the release of the report, the West Virginia Bureau for Public Health (WVBPH) has been actively and effectively engaged in preparing for broad changes in the public health delivery system. The BPH joined with the West Virginia Public Health Association (WVPHA) in 1989 to form the Ad Hoc Committee on the Future of Public Health in West Virginia. Chaired by the Dean of the West Virginia University School of Medicine, the committee made specific recommendations to upgrade the qualifications of key public health professionals at the state and local level. Credibly, West Virginia has made continuous incremental improvements on many issues cited in the committee's report. As an example, since 1991 the state's public health bureau has been led by a medical physician also credentialed in public health.

Preparing the state's public health work force and building the infrastructure essential for its technological and scientific responsibilities were the drives behind the 1994 West Virginia Statewide Public Health Advisory Council. The plan developed by this council helped to focus attention and available resources on accomplishing the mission of advancing a modern and prepared public health system within the Mountain State.

In 1996 the West Virginia Legislature approved Standards for Local Boards of Health (64CSR73). Among other performance-based standards, the standards require the local health officer to be a WV-licensed physician skilled in preventive medicine and sanitation. The standards are measured annually through the Annual Program Plan submitted by each local health department. The performance measurement of the standards will be phased in over a four-year period of time for planning, training, technology acquisition, policy development, and community partnerships and coalition development necessary to fulfill the standards. The standards define how the local level is expected to meet capacity requirements in the following areas:

- Local Board of Health(Administration)
- Communicable and Reportable Diseases
- Community Health Promotion
- Environmental Health Services (Protection)
- Administration and Financial Systems and Controls

During 1998, all public health professional organizations at the national level, along with the Centers for Disease Control (CDC) and the Health Resources and Services Administration (HRSA), engaged in a process to define performance-based standards for the public health system at every level. In addition, collaboration among these organizations, agencies, and academia, is currently in process to define public health profession-specific competencies. This activity is expected to better prepare the work force and measure its capacity to perform public health functions. It is also expected that these standards and competency measures will become requirements for public health systems. These requirements will, more likely than not, become essential for federal public health funding programs.

A. Public Health System Capacity -- State Level

The West Virginia Public Health System is similar to many across the country. At the state level it is guided and supported by a Bureau for Public Health within the Department of Health and Human Resources. The Bureau is the agency designated to be responsible to the national level, seeking and administering federally funded population-based health programs. The Bureau is responsible for reporting to the CDC, collecting and reporting data related to the states' vital statistics, the incidence and tracking of reportable diseases, such as tuberculosis, influenza, vaccine preventable diseases, communicable disease outbreaks, rabies, and other such population-based health concerns.

The mission of the Bureau is to establish a public health system that is designed to:

- assess and monitor the health status of the population;
- promote a healthy and productive life for West Virginians;
- protect the public's health from adverse environmental factors;
- reduce the incidence of preventable disease and death, and
- assure a health care delivery system that has adequate resources and qualified public health professionals to provide a continuum of care, including:
 - basic disease control activities,
 - comprehensive primary care,
 - coordinated emergency medical services, and
 - integrated hospital services.

To aid the Bureau in its work related to *health protection, promotion, and prevention* are several highly professional and scientific offices within the Bureau. The Bureau employs a work force of more than 600.

The Office of the Chief Medical Examiner (OCME): This office provides forensic autopsy services to West Virginia citizens to help reduce the incidence of preventable disease and death, and to monitor the incidence of certain life-threatening conditions. The office responds to disasters and assists communities in recovery. It provides medical-legal investigations for deaths due to homicide, accident, suicide, sudden infant death syndrome, and deaths unattended by a physician, including those caused by natural disasters. The office investigates therapeutic misadventure fatalities and deaths occurring in public institutions such as jails, prisons, and state hospitals. In addition, the office helps prevent epidemics and the spread of disease by providing death analysis, autopsies and toxicologic studies to determine the cause and manner of death and provide this information to investigative agencies and medical care providers in order to alert them to potential diseases that affect public welfare, safety, and health. The responsibilities of this office are mandated under Chapter 61 of the WV State Code.

The Office of Community and Rural Health Services (OCRHS): OCRHS operates as a group of integrated units that collaborate to support, strengthen, and develop West Virginia's health care delivery system.

- The Financial Unit facilitates a high level of accountability for the funds administered by OCRHS.
- The Division of Primary Care provides funding and professional support to a statewide network of community-based primary care centers with more than 100 clinic sites located primarily in medically underserved areas. Primary care clinics serve more than 300,000 patients annually. They provide more than one million medical encounters annually, 70% of which are for those West Virginians who are uninsured, under-insured, or are covered by Medicaid or Medicare.
- Emergency Medical Services (EMS) was created by the WV legislature to serve as the lead agency in developing and coordinating the WV EMS system. This office provides EMS personnel certification, EMS training, EMS agency and ambulance licensure, EMS communication, injury prevention and education, EMS data collection, disaster coordination, technical assistance to EMS agencies, on-line and off-line medical communication, quality assurance, and grants management.
- Rural Health is the focal point for rural health issues in West Virginia and contributes to innovative approaches for addressing rural health needs of our citizens.
- Recruitment is a specialized division which assists WV's rural and medically underserved communities in their efforts to recruit and retain qualified health care providers.

The Office of Environmental Health Services (OEHS): This office is responsible for developing, administering, and implementing a statewide comprehensive environmental health program that provides mandated services for the health and well-being of citizens of the state in the home, workplace, and the community. Below are some of the services provided by the OEHS's three divisions:

Engineering assures safety of 2,000 public drinking water supplies to 1,387,000 customers. It also

- Issues 275 construction permits annually based on engineering reviews.
- Provides technical assistance to 335 water systems regarding fluoridation.
- Reviews 40,000 water monitoring reports to identify and assure correction of over 200 contaminants.
- Provides training for 500 and certification for 125 public wastewater systems operators annually.

Radiation, Toxic and Indoor Air Quality carries the responsibility for developing and implementing programs to prevent environmental exposure to toxic substances such as asbestos, lead, and radiation, primarily through identification of hazardous exposures, public education, and control of exposures. Specific services provided include the following:

- Conducts inspection of 3,450 mammography and medical X-ray units.
- Trains and licenses 4,000 individuals in asbestos abatement.
- Conducts environmental lead assessments in homes of lead poisoned children.
- Annually inspects WV schools for asbestos during repair.

Public Health Sanitation has the responsibility for programs to eliminate, control and continuously improve environmental and public health sanitation. These services include the following:

- Surveillance and regulation of infectious medical waste.
- Quarterly inspecting 290 producer dairies and six milk-processing plants for milk sanitation.
- Inspects 40 food-processing firms, 12 state health care, and eight correctional facilities for food sanitation.
- Trains and certifies sewage system installers.
- Provides ongoing training for over 130 registered sanitarians in the state.

The Office of Epidemiology and Health Promotion (OEHP) aims to reduce premature disease, disability, and death by monitoring and reducing the prevalence of behavioral risk factors that contribute to chronic disease. This is done through three divisions.

The Health Promotion Division works to improve the well being of West Virginians by promoting healthful behaviors and establishing environments that support positive health behaviors. The programs of this division include: Cardiovascular Health Program (CVH), Community Health Promotion, Diabetes Control, Tobacco Control, Osteoporosis Prevention, and the Healthy People 2010 program.

Surveillance and Disease Control Division tracks occurrences of diseases, provides preventive interventions, and educates the public on protection from diseases. This division includes the Cancer Registry, Infectious Disease Epidemiological Services, Hemophilia Program, HIV/AIDS, AIDS Prevention Centers, HIV Care Consortium, HIV Community Planning, Immunization, Sexually Transmitted Diseases, and Tuberculosis Control.

Health Statistics Center Division collects and analyzes certain health data to assist in health planning, policy development, and assessment.

The Office of Health Facility Licensure and Certification (OHFLAC) is mandated to review and act upon recommendations regarding license and class of license generated for all hospitals, nursing homes, personal care homes, residential board and care homes, behavioral health facilities and birthing

centers in the state. In addition, OHFLAC oversees Nurse's Aide Training and Competency Evaluation Program, and maintains the Nurse Aide Abuse Registry. In addition, this office reviews and acts on recommendations regarding participation in Medicare and Medicaid programs for health care facilities and certain service providers.

Following is a listing of the types and numbers of health care providers that are licensed and/or certified by OHFLAC.

Provider Type	Licensed Facilities	Certified Facilities
Ambulatory Surgical Centers		10
Behavioral Health Centers.....	83	
ICF/MRs		62
Birthing Centers.....	2	
End Stage Renal Dialysis.....		20
Home Health Agencies		75
Hospices.....	23	20
Hospitals	67	67
Swing Bed Services in Hospitals.....		17
Legally Unlicensed Registered Homes	382	
Long Term Care		
Nursing Homes	106	
Skilled Nursing Facilities		112
Nursing Facilities		31
Medical Adult Day Care Centers.....	2	
Outpatient Physical Therapy.....		
Personal Care Homes	58	
Portable X-ray Units.....		3
Residential Board and Care Facilities.....	69	
Rural Health Clinics		75

The Office of Laboratory Services (OLS) provides for the maintenance of quality-assured laboratory services to aid in the diagnosis, treatment and prevention of communicable, chronic and genetic diseases. The Office of Laboratory Services also serves as a reference laboratory to perform unusual or difficult procedures and to offer specialized laboratory testing not routinely done in other in-state laboratories. The lab supports core public health functions by providing laboratory testing for programs such as Family Planning, Maternal and Child Health, the STD Control Program, Epidemiology, Environmental Health Services and local health departments. To improve laboratory performance throughout the state, OLS staff assists in training, information updates, approval programs and consultative services for both public and private laboratory personnel throughout the state.

Below is a listing of the services conducted by OLS in the 1997-98 fiscal year:

- Licensed all (3,000) clinical laboratory personnel in the state.
- Conducted CLIA-88 inspections of 166 laboratories.
- Approved 16 in-state and 29 out-of-state HIV laboratories.
- Approved 71 laboratories for prenatal syphilis serology testing.
- Approved 61 laboratories for drinking water testing.
- Maintained official records of certified officers and breath test instruments for driving under the influence of alcohol (DUI) program.

During that same fiscal year period, the OLS conducted the following clinical laboratory testing:

TEST	Number of Test Conducted
Pertussis	3
Mycobacteria	1,397
Enteric	169
Gonococcus	9,301
Other Bacteria	235
Mycology	174
Parasitology	680
Rabies	922
Syphilis Serology	12,048
Hepatitis/Rubella	10,299
Chlamydia	47,745
HIV	8,256
PKU	32,520
Galactosemia	32,419
Hypothyroidism	32,430
Hg Neonatal	8,353
Hg Adult	94
Milk/Dairy	5,765
Food	128
Environmental Micro	21,723
Environmental Chemistry	2,468
Blood Lead	2,768
Bardane	5,519

The Office of Maternal and Child Health (OMCH) assures a quality, comprehensive and coordinated system of health care for mothers, children and their families. These services are provided through funding for specific services for the low income, uninsured and Medicaid-eligible. Information, referral and outreach to the public about available services are also provided. MCH is dedicated to improving the health outcomes for women and children of West Virginia.

The December 1997 *Presentation of the Office of Maternal and Child Health to the Legislative Oversight Committee on Health and Human Service* provided the following data related to program services and clients. This listing provided here is just a partial report of the services provided by MCH.

Family Planning services are provided to reduce the risk of unplanned pregnancies. Recently pregnant women are helped through early pregnancy testing and referral for care. Sterilization for both males and females is covered. Below are the numbers of services provided in 1997.

Family Planning Services

Contraceptive Services	Female Sterilization	Male Sterilization
71,491	361	71

The Right From The Start Program provides medical risk assessment and care coordination for at-risk mothers and babies. This public health approach to prevention has proven to be cost and medically effective. Below is the number of people served in the 1996 calendar year and the cost per patient for these services.

Right From The Start Services

RFTS Women	RFTS Infants	Cost per Patient for RFTS
13,792	3,033	\$268.28

Transportation to medical care is a major stumbling block for many West Virginians, particularly in rural areas that have no public transportation. MCH met transportation cost through grants from philanthropic foundations and provided transportation to people in 54 counties. Below are listed these MCH-sponsored trips for medically necessary services.

TRIPS To Medical Care

Prenatal Care Visit	9,792
Infant Care Visit	2,158
Total Transportation Services	11,950

The Breast and Cervical Cancer Screening Program has provided thousands of women the opportunity for regular cancer screening since the program began in 1992. Below are the numbers of women receiving screening through this program over a five-year period.

Cervical Cancer Screening

1992	1993	1994	1995	1996
5,799	11,494	14,378	15,910	16,058

Breast Cancer Screening

1992	1993	1994	1995	1996
1,670	4,705	5,266	7,279	8,628

Nutrition Services provides nutrition-related expertise for public health programming. This office also directs and administers the federal Department of Agriculture nutrition supplement program for Women, Infants, and Children (WIC). This program is dedicated to promoting optimal health opportunities for pregnant and lactating women, infants and children who qualify. The WIC services are delivered through contracts to seven regionally situated organizations across the state. For calendar year 1998, the following groups of West Virginia women and children were served by the WIC program. The total served for the year was 53,704.

West Virginia WIC

Pregnant Women	Breast-feeding Women	Non-pregnant, Non-breast-feeding Women	Infants	Children
6,658	1,664	4,491	12,812	28,079

B. Building State Capacity

Since 1988 the WVBPH has been planning and building its infrastructure capacity through a number of different programs and initiatives. Following are some of the initiatives aimed at improving the state's public health system:

- **Communications and technology:** Participation in the WV Information Network for Public Health Officials project has helped to develop the capacity to handle emerging data, technology, and analytic issues. This capacity must be completed by preparing and linking all local health departments and the state office for rapid reporting of infectious and communicable disease occurrences and for transmitting other important public health information.
- **Work force development:** Documentation of the public health training plans through a strategic planning document developed by the 1994 Statewide Public Health Advisory Council helped focus resources on work force development. The Bureau has continued this focus by utilizing distance-learning technologies to produce and download public health training programs, providing for a statewide public health training and education coordinator, working collaboratively to establish the WV University, School of Medicine's Master's in Public Health Program, taking a leading role in establishing the Public Health Leadership Institute of North Carolina, South Carolina, Tennessee, Virginia, and West Virginia, and defining the specific training needs of the public health work force in the Transitions Project.
- **West Virginia has also taken significant steps to prepare its public health work force.** The newly created and certified Master in Public Health (MPH) Program at West Virginia University School of Medicine, Department of Community Medicine, graduated its first class in May 1998. The first class of WV scholars of the Public Health Leadership Institute of North Carolina, Virginia and West Virginia graduated in November 1998. Educational programs focused on preparing WV's local health officers were initiated in 1999. To strengthen and enhance the educational competencies of the work force, the Continuing Education Committee of the WV Public Health Association, the University System of West Virginia, and the BPH are developing profession-specific priorities for public health competencies. Training opportunities to provide tools, knowledge, and skills necessary for basic public health system changes are under consideration in the Transitions Project. The topics include training to improve skills in community health assessment, diagnosis, program development, and data management. Training will also be offered to improve skills in financial reporting, budgeting, personnel policy issues, and grant writing. Public health nurse training on epidemiology, community health promotion, community disease control, community health promotion, disease surveillance and case follow-up, and public health nursing orientation programs are planned.
- **Transitions Project:** The Bureau, partnering with the WV Public Health Association, designed and is implementing a plan to strengthen state-level infrastructure and local public health through the WV Public Health Transitions Project. The plan has provided a framework for focusing on the consistent provision of three basic public health services described in Local Health Performance Standards. Standards will then be measured for

compliance in the health department's annual program plan. In addition, actual costs of delivering basic public health services are being identified by the Basic Public Health Services Cost Subcommittee. The Legislative and Regulatory Subcommittee will review all state public health legislation and regulations and make recommendations for changes to the *WV State Code and Rules*. BPH will coordinate a special project to bring business partners and public health together to explore partnering on common interest.

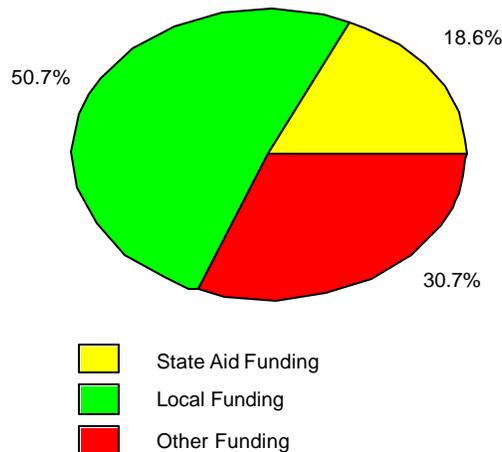
C. Public Health System Capacity -- Local Level

Every county in the state of West Virginia is required to have a Board of Health responsible for carrying out the public health responsibilities at the local level. The WV State Code allows for the optional organization of boards under one of three sections to Chapter 16, Articles 2 and 2A. The 55 county boards of health are currently organized into 48 local health administrative agencies. One board contracts for public health services to be provided by the county primary health care center. There are a total of 54 local health departments, many of which offer services at multiple sites.

In the 1998 fiscal year, the local boards of health reported more than 1.02 million encounters for public health services. All local health departments receive some "state aid funding" through state appropriations. Forty-one local health departments receive local funding, and eight local health departments/public health entities receive no local funding. Most of the eight do receive funds from the local board of education to provide certain school health services.

According to the Office of Community and Rural Health Services, Division of Public Health Nursing and Administration's 1998 publication *West Virginia Local Health Departments Profiles*, the projected 1999 fiscal year total funding for local health was \$ 40,989,467. The chart below identifies the sources of that funding.

FIG. 1
Local Health Funding



D. Local Public Health Professionals

According to the *West Virginia Local Health Department Profiles 1998*, the state's local health departments employed nearly 883 health care professionals and assistants through the WV civil service system. Some additional local health workers served on a contract, including the majority of the local health officers. Of the 883, nearly 30% are nurses and nearly 12% are sanitarians.

Given below a breakout of certain local health employees covered under the civil service system. The following list does not reflect health professionals such as dentists, dental assistants, and office personnel, which number 466.28, more than 52% of the total employees hired within this system.

Local Health Professionals

• Nurses	261.4
• Licensed Practical Nurses	18
• Registered Sanitarian	79
• Sanitarian	23.5
• Physician/Physician Director	7.7
• Administrator/Office Manager	22
• Other Professional*	6

*Other professional include position titles such as epidemiologist, community health specialist, health promotion specialist, and physician assistant.

In a study conducted by the University of North Carolina at Chapel Hill, School of Public Health (UNC-CH-SPH), it was reported that only a handful (about three of 48) West Virginia local health officers have a MPH. The state has just three full-time local health officers, leaving the majority of the local health departments under the direction of medical physicians who are board certified in areas other than public health or preventive medicine and who work the majority of time outside of the public health department. Fewer than 30% of the local health nurses possess a BSN.

What West Virginia does have, the report goes on to say, is a ready market of candidates for advanced public health training and education. In a study conducted by West Virginia University, more than 960 respondents were identified who were interested in enrolling in an advanced public health education program. Additionally, in 1998, more than 40 nurses enrolled in an intensive 15-week satellite telecourse on diabetes. The course was offered free of charge through the state's Diabetes Control Program. This demonstrates that, given the resources and opportunity, West Virginia public health professionals are eager and willing to take advantage of professional development. The UNC-CH-SPH concluded its report by stating that "West Virginia has a broader need for a coordinated program that meets established goals for comprehensive training in core public health concepts."

E. Basic Public Health Services

Local health departments have traditionally offered a variety of services including those aimed at disease surveillance, environmental health services, health monitoring, protection and promotion. In fact, during 1998 local health departments reported offering more than 68 services. Many of these services, such as home health, EPSDT, family planning, and maternity are considered personal medical care services. Gradually, local health departments have begun to move away from the provision of these services and to focus on basic public health care. Basic public health services are the essential foundation for a healthy West Virginia, healthy local communities, and healthy citizens.

In 1998, the state and local levels of public health came together to clearly define the basic services local public health would be expected to provide. This clarification was an essential stepping stone to rebuilding the local public health infrastructure. It is important to note that the WV local health system faced serious financial threats with as many as 10 or more local health departments facing potential closure in 1998. Loss of revenue from Medicare-funded home health services threatens 17 local health departments. During 1998, 102 local health department employees were laid off due to loss of revenue. Personal medical service, which previously provided local health departments'

revenue to offset the cost of basic public health services, was diminishing. The basic services then would be those population-based services required by state code or regulation, which all local public health departments must provide and for which state funding is provided. These services are those necessary to protect the health of the public and to which every citizen of the state should be entitled.

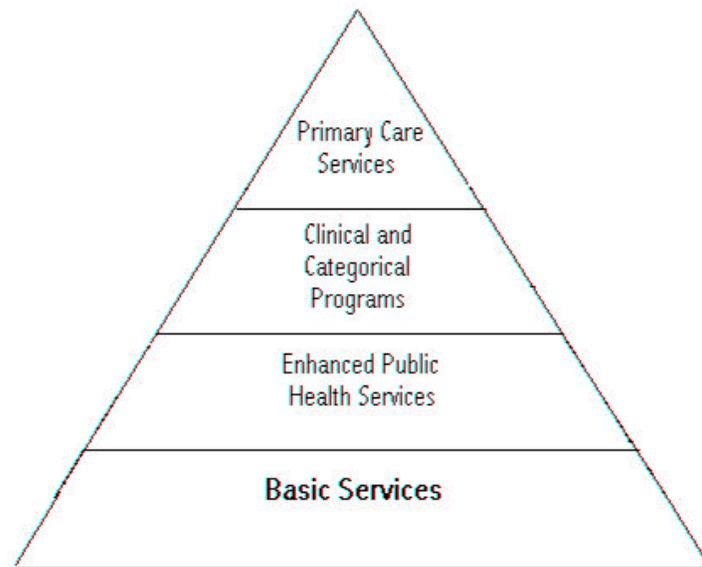
The basic local public health services fall into three categories:

- **Communicable Disease Prevention and Control:** These services are those related to the prevention and control of communicable and infectious disease, such as outbreak investigation/case follow-up, vaccine preventable diseases, response to epidemics, rabies, sexually transmitted diseases, HIV/AIDS, tuberculosis, and disease surveillance activities.
- **Community Health Promotion:** These services are those related to the assessment and reporting of community health needs to improve health status, the facilitation of community partnerships to identify the priority health needs of the county, to mobilize community actions to address the priorities, and to monitor the community's progress in improving its health status.
- **Environmental Health Protection:** Environmental health services are those related to protection of the public from environmental health risks including food and milk sanitation, housing and institutional sanitation, recreational sanitation, sewage and waste water sanitation, drinking water sanitation, and response to disasters and disease outbreaks.

The local public health departments assure that these service needs of their communities are met, and meet accountability standards through administrative and financial management. Each local health department is held responsible and accountable for general administration, including budgeting, supervision of personnel, fiscal management, management information systems operations, Board of Health functions, and oversight and appropriate reporting of public health services and programs.

Other (nonbasic) public health services are offered by many, but not all, local health departments in the state. The following list of services fall into three categories and may be offered by local health departments because of an identified community health need, and, generally speaking, because the service is not adequately provided for by any other entity.

Public Health Service Structure



Enhanced Public Health Services are those which focus on health promotion. The services are targeted to a particular population, address a health community priority, or assist individuals in obtaining care. Some examples of enhanced services are indoor air quality (lead and radon abatement), clean indoor air ordinances, community-based incentive projects (CBI), and positive pregnancy tracking to assure adequate care and outcome for the pregnant woman. Generally speaking, enhanced services do not produce revenue and are funded by the local government, grants, or contracts.

Clinical and Categorical Services focus on specific health issues. These services are provided to targeted populations, promote health, and prevent disease. Examples of clinical and categorical services include; prenatal care, family planning, breast and cervical cancer screening, child health care, Women, Infants, and Children's (WIC) Nutritional Supplement Program, and home health care. These services are paid for by fee for service (FFS) from Medicaid, Medicare, state administered medical service programs, and certain third party insurance companies.

Primary Care Services are comprehensive health and medical care services for individuals. These services are considered a responsibility of the local health department only if the local board of health has determined that an unmet need for primary care services exists in the county. These services are generally revenue-generating via FFS from third party payors, and contracts for uncompensated care from local, state, or federal government, or other entity.

Gaining the support of the states legislature in 1998, the Bureau is addressing public health infrastructure concerns and population-based health issues through the WV Public Health Transitions Project, a dynamic philosophy of reacting *with*, and not *to*, public health trends as they emerge. The most significant accomplishments of Transitions to strengthen the local level include the following:

- Two regional community-based initiatives have been developed to maximize local expertise and resources and to improve the public health infrastructure capacity and service delivery.
- The state-level program support, monitoring, and technical assistance capacities to local health have been improved.
- Basic public health services for West Virginia have been developed:

- communicable disease prevention and control,
- community health promotion,
- environmental health protection, and
- administration and financial support.
- A formalized agreement has been developed for a mechanism for electronic reporting of data between local health departments and the state.
- A four-year strategy for performance-based public health standards has been implemented, bringing professionals together, strengthening these interconnections, and thereby improving and changing the public health system.

What is absolutely essential is to assure that the WV public health system is continually upgraded and maintained with the highest quality work force and infrastructure. It is essential that we protect the health of our citizens by having the latest technology and the skills necessary to utilize it. We must effectively and quickly identify and track diseases and possess the ability to respond skillfully in the event of natural or man-made disasters. Our capacity to identify health problems and improve the public health is crucial to the economic well-being of our state.

II. POLICY RECOMMENDATIONS, FEASIBILITY, ACCOUNTABILITY, AND EVALUATION

A. The strategic planning process that has laid the groundwork for the changes to the WV public health system must be continued and supported financially.

Barriers: Is it feasible to consider that a continuous and strategic planning process for the West Virginia public health system could be a reality? It is not only feasible; it is essential. One major strength of the system is that it does have an extensive and well-thought-out plan for infrastructure improvement and work force development. It is a local and state level collaboration that appears energized by current leadership and the sharing of a common vision. The WVBPH is responsible for the system's strategic planning process through collaborations and partnerships. Continued progress could be stymied by the following:

Changes in the state and local public health leadership: Stability in leadership and a commonly held vision are particularly crucial for highly professional and scientific organizations facing rapid change. Typical of state, and some local, governments during the last decade is a changeover of the top public health commissioners. A look across the county shows an average of an 18-months term of duty for these state-level professionals.

Accountability and evaluation: The WVBPH is the accountable entity for the system's strategic planning. The annual plans submitted by the local health departments should be able to measure and report activities in the strategic planning process.

The BPH will meet nationally to develop *State Public Health System Performance Standards*, especially Indicator 5.2, Expertise and Capacity for Statewide Planning and Policy Development (ASTHO Draft, State Public Health System Performance Assessment Instrument, Interim Version, 5/19/99).

B. Organizational structure and capacity at the state level must be developed to institutionalize continued public health work force development.

Barriers: Since the 1994 draft plan for work force training and education continuous progress has been made as outlined in this section and repeated in Section Two, Bioterrorism. A main barrier has been funding. The state legislature appropriation and Robert Wood Johnson Foundation funds for the Transitions Project will help to address crucial training needs. These training funds should become part of the WVBPH budget line items specifically targeted for training and education. If the WVBPH Bioterrorism grant application to the CDC is funded, the availability of additional training funds specific to that issue would become available.

The training and education programs are often the first areas to be cut or simply not funded. This is no longer an option for WV. Specific performance measures for the state and the local level will require continued training and education.

A statewide education and training coordinator has been dedicated to assure planning, implementation, and measurement of progress toward meeting these needs. This position and functions should be fully funded. Cost of institutionalizing these functions is estimated to be \$135,000.

Accountability and evaluation: The accountable entity is the Commissioner's Office of the WVBPH. Measures will include:

- Dedicated budget line item funding for work force training and education.
- Dedicated budget line item funding for the state-level work force development (training and education coordination) functions.
- State BPH ability to meet state-level performance standard regarding work force development. Specifically, ASTHO Draft, State Public Health System Performance Assessment Instrument, Interim Version, 5/19/99.
- Essential Service # 8: Assure a Competent Public and Personal Care Work Force.
- Indicator 8.2 Improving Work Force Quality.

C. Profession-specific competencies, needed to enable the work force to deliver the basic public health services, must be identified and progress toward meeting those competencies measured.

Barriers: As reported in this section, one study conducted in WV found a public health work force willing and capable to enhance their basic skills. Barriers identified included an automated personnel system not capable of reporting essential demographic and educational information needed to assess the work force's current capacity. This barrier is currently being remedied by the WVDHHR Office of Personnel Services.

Additional barriers include the ability to define needed profession-specific competencies. The BPH has now established processes to identify those competencies. Reports and analysis of the information are anticipated by the fall of 1999.

Accountability and Evaluation: The entity responsible for assuring a process for the analysis of the current work force educational levels, needed work force competencies, and establishment of statewide measurements of progress lies with the WVBPH Commissioner's Office education and training coordinator. These responsibilities would necessarily be handled in collaboration with the profession-specific state-level leaders.

For state-level activities, measurement would be based upon the timely completion of the above and the state's ability to meet performance measures, specifically ASTHO Draft, State Public Health

System Performance Assessment Instrument, Interim Version, 5/19/99:
Indicator 8.1: Public Health Work Force Assessment, and
Indicator 8.3: Continuing Education, Training, and Mentoring.

For local-level activities, measurement would be based upon the local participation in the timely completion of the above assessment and local-level ability to meet performance measures, specifically; West Virginia Performance Standards for Local Health Departments, as phased in over Fiscal Years 2000, 2001, 2002, 2003, and 2004, including:

CD1: Training

A20: Life Support Training

E 2: Sanitarian Training to Meet Registration Requirements

A24e: The Health Officer shall be a WV-licensed physician skilled in preventive medicine and sanitation.

D. The state's personnel system must establish a process to review and revise the job description and qualifications of public health workers to more adequately reflect the developing profession-specific competencies and qualifications and revise pay scales reflective of these newly emerging requirements.

Barriers: Collaboration and planning will be essential between the WVBPH, WVDHHR Division of Personnel Services, and the WV State Office of Personnel. Funding to upgrade the salaries of public health professionals whose position requirements, qualifications, and functional job descriptions demand an increase will need to be provided primarily through legislative appropriations. Determination of the cost of implementing this recommendation cannot be determined until the related work is complete. The work required could take an estimated two to three years to accomplish.

Accountability and evaluation: Accountability lies with all three identified state government offices, with the WVBPH taking the lead. Measurement will be made through ASTHO Draft, State Public Health System Performance Assessment Instrument, Interim Version, 5/19/99.

Essential Service # 8: Assure a Competent Public and Personal Health Care Work Force.

Indicator 8.2: Public Health Work Force Standards.

Indicator 8.2: Work Force Performance Standards.

E. Funding to support the leadership development of the current public health work force should be expanded to provide for more rapid capacity development of the public health system.

Barriers: As delineated within this section, WV is a partner in the Public Health Leadership Institute of North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. As such, qualifying top-level public health professionals have the opportunity to develop their leadership skills through a year-long experiential program. For FY 2000, costs to the state for 10 qualifying scholars are estimated at \$35,000. This cost has been covered primarily through foundation grants and the WV Attorney Generals' Public Health Trust Fund. Public health leadership development is a state-level responsibility. It is a continuous process, and the cost should be included in the WVBPH budget.

Accountability and evaluation: Accountability lies with the BPH Office of the Commissioner. Measures will include tracking the number of WV state and local public health professionals who complete the leadership training each year. In addition, through ASTHO Draft, State Public Health System Performance Assessment Instrument, Interim Version, 5/19/99:

Essential Service # 8: Assure a Competent Public and Personal Health Care Work Force.

Indicator 8.5: Public Health Leadership Development.

Essential Service # 8: Assure a Competent Public and Personal Health Care Work Force.

F. The Bureau for Public Health and the state Medicaid Program will enter into a formal agreement and will strive to uphold a policy to jointly develop strategies to minimize policy conflicts or problems in implementation of programs.

Barriers: Although the WVBPH and the state Medicaid Program have similar responsibilities and goals related to the health of the state's population, program implementation barriers exist. Federal policies under which each program operates sometime appear conflicting. Decisions required for the careful planning of programs, the expenditure of personal medical care dollars, and collaboration in providing health services to the same populations, pose distinct challenges for the two bureaus. Health policy decisions made in each bureau have a significant impact on the performance measures of the other. Even more important, these health policy decisions affect the health outcomes of the populations served by both. It is of significant benefit to the state as a whole that the two bureaus develop a formal agreement to minimize policy conflicts. To facilitate this endeavor they should develop, and vigorously adhere to, a process of joint health care policy decision making. The greatest advantage is that the current leaders in both bureaus appear to strongly support this development. Cost to implement and support these activities is estimated to be \$33,000.

Accountability and evaluation: The accountable entities are the Commissioner of the WVBPH and the Commissioner of Medical Services. Measurement will be based upon the formal development of the policy and the process, records of the collaborative decision making, annual survey of employees of each bureau to identify problem spots and anticipated issues, other measures as defined by the process established, and, if possible, consumer satisfaction surveys.

Section Two

West Virginia Public Health: Prevention, Promotion, and Protection

According to *The ReliaStar State Health Rankings, 1998 Edition*, West Virginia continues to be one of the lowest ranked states in regard to the overall health of the population. However, the state also is noted for having the greatest overall improvement in health from 1990 to 1998. The principle reasons for improvements in the healthiness of the West Virginia population are the following:

- the prevalence of smoking among West Virginians decreased from 34.0% to 26.6% percent of the population;
- motor vehicle deaths decreased from 3.4 to 2.1 deaths per million miles driven, and
- West Virginia women received adequate prenatal care, improving the statistics from 62.1% receiving adequate care in 1990 to 75.6% receiving adequate care in 1997.

The West Virginia public health system collaborated with many partners at the state and local community levels to carry out major initiatives in each of the noted improvement areas. The state's capacity to work in collaboration, to develop community partnerships, and to measure the results of these efforts have lead us to the forefront in health improvements.

Having clearly established that the most urgent public health needs involve building the public health system infrastructure, and strengthening core public health work force capacity, we now address specific health problems faced by the state's population. Three problems have been identified. These problems were chosen because they have, or may pose, a major impact on the health of West Virginians. Also, the financial and emotional cost of these problems place extreme burdens on the state and its people. Furthermore, like the successes listed above, they are health problems which we can do something about.

The health problems identified here, and the potential solutions and policy recommendations, are related to the following: (1) Cardiovascular Disease; (2) Tobacco Use; and (3) Cancer Control.

Cardiovascular Disease in West Virginia

I. BACKGROUND

Cardiovascular disease is the number one killer in West Virginia. The economic impact of the disease to West Virginia is staggering, and in many cases the disease is lifestyle-related and therefore preventable and treatable. Nationally, cardiovascular diseases claimed more than 700,000 lives in 1996 and accounted for 31.6% of all deaths. In that same year, West Virginia's age-adjusted rate of heart disease was 335.6 deaths per 100,000 populations, more than 21% higher than the national rate.

Ischemic heart disease presents major problems for West Virginians. The 1995 death rate was 13.8% higher for men, and 16.9% higher for women, than occurs nationally (1995 West Virginia Vital Statistics Report). Ischemic heart disease is characterized by a deficiency of oxygen flow to the heart, caused by a narrowing of the coronary arteries, in many cases brought on by deposits on the artery walls. According to the American Heart Association (*A-Z Guide, 1999*), as many as three to four million Americans may have ischemic episodes without knowing it. Silent ischemia episodes might be identified when an individual seeks care due to angina, and receives further tests to determine the extent of the heart disease.

One might say that the current West Virginia lifestyle contributes significantly to our high rates of cardiovascular diseases. The state's 1996 Behavioral Risk Factor Surveillance (BRFSS) survey reported a higher-than-average prevalence for all cardiovascular risk factors, such as a lack of physical activity, obesity, inadequate consumption of fruits and vegetables, high cholesterol levels, current smoking, hypertension, and diabetes. Population interventions that address nutritional intakes of fat, saturated fatty acids, fiber, a reduction in tobacco use can, when combined with weight management, have a major impact on chronic disease prevention in West Virginia. Like many other chronic diseases, effecting control over cardiovascular disease will necessitate a stronger relationship between public health, medicine, and medical research. Interdisciplinary teams will need to work collaboratively, planning and implementing strategies to promote healthier lifestyles and educating the public about the disease.

West Virginia Women and Heart Disease. West Virginia women reported the highest obesity rate among all 50 states (1996 BRFSS). The National Cholesterol Education Program of the National Heart, Lung, and Blood Institute suggests that cholesterol screening be incorporated into primary care visits for women. The *WV Women's Health Study-1998*, conducted by the WVU Prevention Center, found that 41% of women did not know their cholesterol levels.

Youth Heading Toward Heart Problems. It is well recognized that health behaviors established during youth often extend into adulthood. Because WV youth are growing up in an environment of unhealthy lifestyles, their chance of having cardiovascular diseases as adults are greatly increased. The 1995 Youth Risk Behavioral Survey (YBRFS) indicates a plethora of behaviors heading our youth in this direction. For example, in 1995:

- only 44.8% of WV male students and 30.9% of WV female students attended physical education class;
- WV students led the nation in prevalence of youth smoking (76.4% had ever tried a cigarette); and
- WV students did not consume sufficient fruits and vegetables (only 22.8% had consumed five or more servings the previous day).

PEIA Pathways to Wellness Program and Progress. Since 1992 the Public Employees Insurance Agency has sponsored an employee wellness program. The program has transitioned from "pilot programs" with 1,500 active participants at work sites to a statewide approach involving 53 work sites with 9,432 active participants. An active participant is one who is engaged in behavior modifications, such as walking, exercising, nutritional eating or other action which will improve their health. An initial health screening conducted during the second phase of program implementation showed that 47% of employees screened had three or more risk factors for circulatory system problems, and 50% had total cholesterol levels of 200 mg/dl or more. Although this program has not limited its focus to cardiovascular diseases, it has targeted certain risk factors which are known to contribute to cardiovascular disease. Specifically, the PEIA Pathways to Wellness Program targets smoking, high blood cholesterol, high blood pressure, sedentary lifestyle, obesity, and high blood sugar.

The PEIA has monitored the health improvement progress of employees participating in the program. The results make it clear that West Virginians can and will improve their health status if provided with health information and incentives. The following are some examples of improved health status measurements:

- 25% of participants (514) reported their health was somewhat to much better compared to one year ago.
- 30% of participants (649) reported their nutrition and eating habits were somewhat to much better compared to one year ago.
- 40% measured systolic blood pressure improvements.

- Over 30% measured diastolic blood pressure improvements.
- Over 20% demonstrated improvements in total cholesterol levels.
- Over 25% demonstrated improvements in HDL cholesterol levels.
- Over 20% demonstrated improvements in blood glucose levels.

Why does PEIA continue to expand the wellness program? It does so because employee health improves and financial savings to the program can be projected. Utilizing a software program that factors the current high risk condition and average annual cost of treatment with the reduction in the condition and cost, PEIA is able to demonstrate an total projected savings resulting from the active participants' changes in health status, PEIA has estimated a savings of \$2,197,389.

The Cost of Cardiovascular Disease in West Virginia. The financial burden of cardiovascular disease in West Virginia is staggering: according to a recent CDC report, estimated direct medical care cost and indirect lost productivity costs for the disease is \$896 million (CDC, *State Cardiovascular Disease Highlights: The Burden of Cardiovascular Disease in the United States-1997*).

II. STRATEGIES FOR PREVENTION AND PROTECTION FROM CVD

State Cardiovascular Heart Program Core Capacity. The WVBPH, in partnership with medicine, will build the state-level infrastructure and core capacity to adequately address the West Virginia lifestyles that make West Virginians sitting targets for cardiovascular diseases. This program will provide significant opportunities to implement program interventions geared to reduce the incidence of cardiovascular disease in West Virginia. The WVCVH will measure the success of such interventions and report the findings. Collaboration of numerous entities will be essential for success, especially collaboration with hospitals and medicine. The primary objectives will focus on influencing social and individual behaviors which contribute to a reduction in heart diseases.

Cost of Cardiovascular Health Program Implementation. The cost of implementing the West Virginia Cardiovascular Health Program is \$500,000 for the first year. The program has been funded by the Centers for Disease Control and Prevention for five years. Subsequent year costs are estimated to be: Year 2-\$550,000; Year 3- \$605,000; Year 4-\$665,500; Year 5-\$732,050.

Program Elements
Build a team of qualified, discipline-specific staff to develop and implement a Cardiovascular Health Plan.
Expand the statewide Cardiovascular Health Coalition to include members who will be instrumental in obtaining public support for cardiovascular disease prevention programs and in the development, promotion, and implementation of the state CVH Plan.
Provide training to increase state-level and community-based skills to use and analyze health data for statewide program planning, community health assessments, and community-based program planning to reduce cardiovascular diseases.
Increase the Bureau for Public Health’s scientific capacity to define the cardiovascular disease problem in WV, allowing further epidemiological and behavioral risk factor analyses. Expand methods of data system integration to provide comprehensive data needed for assessing and monitoring the CV health of WV and evaluating program outcomes.
Target high-risk groups with population based risk reduction strategies.
Provide training of laboratory staff statewide utilizing the CDC guidelines for a lipid standardization program. Develop policies for lipid testing in CDC standardized laboratories. Move to request standardization certification of laboratory personnel performing these tests.
WVBPH will conduct health care worksite inventories to determine whether worksite wellness programs exist and are promoted by the employers.
WVBPH will partner with the American Heart Association-WV Affiliate, and St. Mary’s Hospital, Huntington to develop WV targeted social marketing campaigns to educate the at-risk public on heart attack symptom awareness.

III. POLICY RECOMMENDATIONS, FEASIBILITY, AND ACCOUNTABILITY AND EVALUATION

A. The WV PEIA should continue state employee wellness programs, report the findings, and seek opportunities to expand wellness programs for all state employees.

Barriers: The barriers to continuing and expanding state employee wellness programs are those related primarily to cost. Additional education of state-level bureaucrats is needed to gain their full support. They should be educated as to the effectiveness of wellness programs on employee morale,

productivity, and absenteeism. WELCOA, the Wellness Council of America has demonstrated the cost effectiveness of wellness programs to business and industry. PEIA has had the foresight to establish these programs for state employees.

Accountability and evaluation: Accountability is the responsibility of the PEIA Pathways to Wellness Program. Evaluation tools should be designed to reflect the agencies supporting participation of their employees, and satisfaction and performance measures of participating employees.

B. The WV PEIA should model the way for the insurance industry in WV by collaborating with the WVBPH to develop a process for providing incentives to employers and the insured for environmental interventions and measurable indicators to promote cardiovascular health (CVH), physical activity, and healthy nutrition.

Barriers: Both PEIA and the WVBPH have a history of partnering to improve the health of state employees. The initial pilot for the current state employee wellness program was just such a partnership. Study and collaboration regarding wellness incentives used in West Virginia and across the country would pose the first barrier. Cost of implementation would be dependant upon the incentive(s) chosen.

Accountability and evaluation: Accountability would be with the PEIA Pathways to Wellness Program. Environmental interventions developed and implemented by participating agencies and organizations would be measured (such as, providing shower facilities for mid-workday exercisers and/or promoting clean, safe and accessible stair ways to encourage walking floor to floor). Employers creating and promoting utilizations of environmental interventions would be rewarded. Cost of incentives would be determined as each is chosen.

C. The WV Medicaid Program in partnership with the WVBPH should plan health education programs and provide incentives for the Medicaid-eligible (including the disabled) who participate in wellness programs.

Barriers: Reaching and educating the Medicaid-eligible regarding the advantages and availability of wellness programs would be the first barrier. However, there are so many avenues of contact with those covered by Medicaid, a plan considering optional contact points could be developed. Some examples of contact sites include primary health care clinics, county health departments, physician offices, and through outreach service workers for EPSDT visits, early intervention services, and children with special needs clinics. A second barrier is the funding for the incentive provided. The cost of the incentive can be determined during the planning process.

Accountability and evaluation: Accountability for assuring planning and implementation would be the responsibility of the Medicaid Program office. Measurement would be designed during planning and would include a process for determining the number participating annually over time. The planning process could begin with the support of the Cardiovascular Health Program.

D. The WVBPH should continue support for Community-Based Initiatives (CBI) Programs. The CBI Program offers grants to local community groups for health promotion interventions focusing on policy and environmental strategies related to physical activity and nutrition. The annual cost estimate for community interventions is \$300,000 based upon similar community tobacco use education projects.

Barriers: The WVBPH has history and experience in funding and promoting community-based initiatives. Potentially, design of the CBIs would be completed during the first year of the CVH program. Funding for implementation of the CBIs could be studied and identified for a subsequent year.

Accountability and evaluation: The accountable agency would be the WVBPH. Prioritization of funds for CBI programs aimed at policy and environmental strategies for physical activity and nutrition would be a goal. Evaluation would be based on development and funding of such programs. Additionally, once activated, the CBIs would be responsible for reporting the policy and environmental strategies employed within their community.

Specific BRFSS survey questions related to physical activity and nutrition would be used to monitor changes in behavior over time.

E. The WVBPH should continue support for the Community Health Promotion Program, a statewide network of nine CHPS specialists working to promote healthy lifestyles.

Barriers: Program funds are always at a premium. However, this is an established and effective method of promoting healthy lifestyles, which is the major factor affecting the health of our citizens.

Accountability and evaluation: The WVBPH holds the responsibility for maintaining and promoting this program. Measurements of the effectiveness of CHPS should continue. CHPS programs are currently funded at \$342,000 annually, including \$180,000 funding from the federal Preventive Block Grant to WV, \$117,000 state funds, and \$4,500 of the NIH ASSIST Program.

F. Collaboration between the WVBPH and the WV Insurance Commission should develop, adopt, and measure compliance with preventive care policies for CVH for insurance companies.

Barriers: CVH compliance measurement for insurance companies is a somewhat new strategy for reducing cardiovascular disease. However, the effectiveness of preventive care policies is not a new concept. Basically, this is the same approach which sets standards for physicians to provide adequate prenatal care, immunization schedules to follow, and the standard age/sex annual physician visit routines.

Accountability and evaluation: Accountability for establishing, implementing, and measuring compliance would be with the State Insurance Commissioners Office. Measurements would be established during the planning, but would also include monitoring of the BRFSS for changes in lifestyle behaviors that will produce a positive impact on the incidence of cardiovascular disease among West Virginians. Behaviors to be monitored would include those measuring physical activity, dietary habits, and tobacco use.

Additionally, the vital records reporting causes of death can be monitored to identify trend changes in deaths related to cardiovascular disease.

G. The WVBPH and the WV Department of Education should collaborate to encourage school policy development and partnerships between the local boards of health and the county boards of education to determine school specific environmental interventions and measurement indicators that promote healthy eating and physical activity among students, faculty, and staff (including the disabled) and to focus on healthy lifestyles and disease prevention, beginning in kindergarten and continuing throughout every semester of high school.

Barriers: This is West Virginia's greatest opportunity to effectively change the negative lifestyle behaviors that are plaguing our citizens, making West Virginia one of the least healthy states in the country. The government organizations are in place and can effect enormous benefits to the state's health by collaborating to assure our students get the best opportunities for health. How often local board of health, and board of education members join forces is unclear. However, local boards of health are encouraged to have as a member a representative of the local board of education. Many

local health departments provide in-school health services under contract to the local board of education. Subsequently, in most local areas a relationship already exists. Additionally, through the Healthy Schools Programs, now over five years old, collaboration has been a requirement. It may not be commonly known that in grades 9-12 only one credit for physical education is required. Many students complete the other two years without any physical activity requirements. First, the local boards would need to educate themselves regarding the healthful lifestyle their schools are offering students and determine changes that might be advantageous.

Accountability and evaluation: Accountability for collaboration at the state level is borne by both the WVBPH and the Department of Education. Evaluation would be based upon development of a plan to encourage greater collaboration between the two local boards. Also, evaluation may be conducted to measure the success of implementation of that plan from a state level by the number of local health departments reporting collaboration with the local boards of education. The number of environmental interventions created at the school level will be identified.

The WV Youth Risk Behavior Survey can be monitored to identify changes in youth risk behaviors especially those trends related to dietary behaviors and physical activity.

Tobacco Use In West Virginia

I. BACKGROUND

West Virginia has long had a history of a high rate of tobacco use among its citizens. First established in 1984 through the CDC, the Behavioral Risk Factor Surveillance System (BRFSS) survey has measured cigarette smoking since. In 1984, it was found that 32.8% of West Virginians over the age of 18 were current smokers. It is not surprising, then that West Virginians experience a higher than the national average incidence of diseases for which tobacco use is a major risk factor. The 1998 CDC State Profile shows that West Virginia is well above the national average for cardiovascular disease, chronic obstructive pulmonary disease (COPD), and tobacco-related cancers (lungs, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder). Tobacco use and exposure to tobacco smoke (secondhand smoke) are also responsible for respiratory infections and stomach ulcers. Children of smoking parents, compared to children of non-smoking parents, show an increased frequency of respiratory symptoms and infections, especially children under 18 months of age.

Changing the health behaviors of West Virginians is key to improving the state's public health by reducing the incidence of, and deaths due, to these tobacco related diseases. Since tobacco use is so highly addictive, the strategies to change this behavior are necessarily cultural and social, as well as individual. A decade ago, the WVBPH's 1989 Behavioral Risk Factor Surveillance System Survey documented that West Virginia exceeded the national average of adults who smoked, ranking the state second in smoking prevalence and first in smokeless tobacco use among the forty states participating in the study. Eight years later, with all 50 states participating, 1996 BRFSS data placed West Virginia as the 8th highest for prevalence of smoking, with 26.6% of the West Virginia population self-reporting as current smokers.

In 1989 the WVBPH, in its *Healthy People 2000: West Virginia Objectives*, targeted tobacco use as a priority area for improvement of the states health. Four objectives to curb tobacco use and to reduce second hand exposure to smoke were identified. The April 1997 Mid-course Review is substantive evidence of the enormous difficulty of impacting cultural and social norms to improve the health of the population. Of the four objectives targeted, minimal evidential progress was reported for three of the objectives. The assumption, then, was that the Year 2000 objectives to reduce tobacco use in West Virginia would only partially be realized.

Medical Cost Attributable to Tobacco Use. The use of tobacco is costly both in terms of dollars spent on illness diagnosis and treatment and in lives lost. Direct medical costs related to cigarette smoking alone were projected to be nearly half a billion dollars in 1993 (*Tobacco Is Killing and Costing Us* – WVBPH, January 1999). A revised estimate published by the Bureau indicated that approximately \$656.07 million dollars would be spent in 1999 on smoking-attributable direct health care costs. The Midcourse Review published by the WVBPH in April 1997 reported that an average of 12 deaths each day can be attributed to cigarette smoking.

Who Is Using Tobacco. Looking more closely at who in the state is using tobacco offers strategic opportunities to curb tobacco use in West Virginia:

- West Virginia women aged 18-24 have the highest prevalence (45%) of our adult smoking population. This is of great concern because this is the age predominant for childbearing years. The use of tobacco has a considerable correlation with the incidence of low birthweight babies.
- West Virginia death rate due to smoking-related illnesses is fourth (4th) highest in the United States (CDC, 1996)
- West Virginia high school students rank fifth (5th) highest in the country for cigarette use. (1997 YRBS).
- West Virginia's adult males rank number one in the use of oral (spit) tobacco. Sharing this behavior with their sons results in the state's high school boys ranking third in the country for smokeless tobacco use (1997 YRBS).
- By the age of 12 over half of our WV children have smoked a whole cigarette (YBRS 1995).

Coalition Building and Community Efforts to Curb Tobacco Use and Exposure. In the late 1980s the National Cancer Institute (NCI) recognized West Virginia's plight with high tobacco usage and funded a statewide coalition effort aimed at tobacco control. The NCI's American Stop Smoking Intervention Study for Cancer Prevention Project (ASSIST) and the American Cancer Society formed a partnership to help West Virginia and other states. The West Virginia program is called the WV Tobacco Control Program. Out of this program developed a statewide coalition, the Coalition for a Tobacco Free West Virginia, that has been largely responsible for the progress made in West Virginia.

By 1998, *The ReliaStar State Health Rankings: An Analysis of the Relative Healthiness of the Populations in All 50 States* identified West Virginia as having the greatest overall health improvements from 1990-1998. One principle reason for this improvement in the state's health is identified as the decrease in the prevalence of smoking from 34.0% to 26.6% percent of the population (P. 11, table 6).

Likewise, the 1997 Youth Risk Behavior Survey (YBRS) administered in West Virginia high schools demonstrated a statistically significant improvement in the percentage of youths in grades 9-12 who had used smokeless tobacco during the past month. This percentage decreased from 20% in 1990 to 16% in 1997.

The YBRS, however, showed no change in the percentage of WV youths who ever smoked cigarettes (75% in both 1990 and 1997) and an increase in the percentage of youths who smoked cigarettes during the prior month, from 37% in 1990 to 42% in 1997.

By far, the greatest immediate impact on the use of cigarettes among West Virginians, especially our youth, can be made by significantly increasing the cost of cigarettes. Cigarette consumption has been found to be inversely related to cost (E.M. Lewit, D. Coates, & M. Grossman, "The Effects of Government Regulations on Teenage Smoking," *Journal of Law and Economics* 24:545-569, 1981). The WVBPH in a 1998 study estimated a decline in WV youth smoking (ages 12-17) from 39.1% reported in 1996 to 24.5% by 1999 given a \$0.67 tax per pack of cigarettes. This decrease in smoking is projected to be accompanied by an overall saving of over 17,000 lives.

The progress made in the reduction of tobacco by WV adults and students has taken almost an entire decade to accomplish. Strong public health education programs, progressive local health clean air regulation, and the work of numerous partnerships and coalitions have helped WV citizens to see and appreciate the value of good health through reduced tobacco use and exposure to tobacco smoke.

Funding from the ASSIST Project, through the Tobacco Control Program (TCP), has enabled the WVBPH to support between 12 and 20 local community coalitions each year. The local coalition projects have focused on:

- adoption of clean indoor air regulations by the local boards of health;
- reducing youth access to tobacco;
- increasing media advocacy and public education; and
- policy advocacy.

By 1999, 42 of 55 WV counties had adopted Clean Indoor Air (CIA) regulations, earning WV the 1997 CIA award from the Americans for Nonsmokers' Rights. Efforts to undermine these local regulations through preemption have been defeated. In addition, the Bureau's TCP, in collaboration with the statewide Coalition for a Tobacco Free West Virginia, has developed, funded, and presented the following programs:

- Taught tobacco prevention with "Not On Tobacco (NOT)," a training model for gender-separate, school-based smoking cessation.
- Supported the West Virginia University Prevention Center in working through athletic coaches to educate students regarding smokeless tobacco.
- Presented CHOICES, a program for children 6-12 years of age and their parents, which teaches life skills.
- Developed "Through With Chew," a media message campaign targeting households that is intended to discourage smokeless tobacco use by adults and kids.
- Provided training for 200 doctors, dentists, and nurses on smoking cessation programs, through the West Virginia University (WVU) School of Dentistry.
- Supported the WVU School of Dentistry in training 138 dentist and dental assistants in clinical-setting strategies to intervene with smokeless tobacco use.

Tobacco Control Settlement Funds. The West Virginia State Attorney General's Office entered into litigation against the tobacco industry, with several other states, in an effort to hold tobacco manufacturers responsible for some of the costs of treating tobacco-related illnesses. As a result of this effort, West Virginia has been awarded \$1.736 billion in payments to begin in the year 2000 and extending beyond 2025. The annual payment will be around \$68 million. According to a bill passed during the 1999 WV legislature on March 13, 1999, the funds are to be deposited and spent in the following manner:

- Fifty percent of the tobacco control settlement funds will be deposited in the West Virginia Tobacco Settlement Medical Trust Fund. The principal cannot be spent. Interest earned may be allocated by the legislature for "the purpose of educating the public about the health risks associated with tobacco usage and for the establishment of a program designed to reduce and stop the use of tobacco by the citizens of this state and in particular teenagers." In addition, it may be spent for any of the four areas listed below.
- Fifty percent of the tobacco control settlement funds will be deposited in the West Virginia Tobacco Settlement Fund. Principal and interest may be allocated by the state legislature in the following ways:
 - support PEIA programs;
 - expand federal-state Medicaid program;
 - fund public health programs, services, agencies, and/or
 - fund state-owned or operated health facilities.

Cost of Expanded Efforts in West Virginia to Curb Tobacco Use. The Centers for Disease Control and Prevention, utilizing the State of California’s very successful tobacco control program as a model, has estimated that the State of West Virginia would require a minimum of \$14,749,188 to effect the same reduction of tobacco use (State Comprehensive Tobacco Prevention and Control Budget Guidelines, November 1998). The program elements and their costs include:

Program	Minimum Funding	Upper Estimate
Community Programs to Reduce Tobacco Use	\$2,828M	\$607M
Community Programs to Reduce Burden of Tobacco-Related Diseases	\$ 2,808M	\$4,183M
School Programs	\$176M	\$264M
Enforcement	\$750,000	\$1.5M
Partnership Grants	\$731,000	\$1.828M
Counter-Marketing	\$1,828M	\$5,484M
Cessation Programs	\$2,119M	\$9,54M
Surveillance & Evaluation	\$1,282M	\$3,124M
Administration & Management	\$641,269	\$1,562M

II. POLICY RECOMMENDATIONS, BARRIERS TO IMPLEMENTATION, AND ACCOUNTABILITY AND EVALUATION

A. The West Virginia Bureau for Public Health, Tobacco Control Program should expand efforts to curb tobacco use and environmental exposure to tobacco smoke (ETS) among West Virginians.

Barriers: The work has already begun and success measured through the reduction in cigarette smoking. Primary barriers include insufficient money to make the difference, and the influence of the tobacco industry on decision making at the state and local levels.

Accountability and evaluation: Primary responsibility to lead this effort lies with the WVBPH. Success will be measured by the following: To eliminate environmental tobacco smoke exposure and associated hazards, by the end of FY 2000, all WV local health departments will disseminate health information, encourage policy initiatives, and establish restrictions on the use of tobacco products in public areas.

By the end of FY 2000, public awareness will increase about the dangers of ETS exposure for children.

B. The Tobacco Control Program should expand efforts to target health educational programs to West Virginians most likely to use tobacco and to those who have strong influences on decision making among these groups of people.

Barriers: Time and energy are essential to a program of this magnitude. Because these groups of people might be considered the more “hard core” when it comes to smokers’ rights, they might be reluctant to dialogue on the topic of tobacco use ills.

Accountability and evaluation: The WVBPH will be the accountable entity. Adult males, especially minorities, union members, and blue-collar workers, will be targeted with educational programs about the risk of tobacco use. Measurement will be whether at least 5% of all union workers and 10% of all African American males in West Virginia have been reached with a program.

The TCP will design an education program to reach adult females of childbearing age regarding the hazards of smoking, especially during pregnancy and when the child is in the home. Evaluation will indicate success if 10% of all women of childbearing age have been reached. Research will be designed and conducted to determine changes over time.

Education programs should be targeted to tobacco-using parents in order to protect children. Success will be measured through surveys or polls demonstrating at least 60% of parents are aware of the dangers to children who are exposed to environmental tobacco smoke (ETS).

C. The WVBPH and the Tobacco Control Program should partner with the WV Department of Education to encourage partnering at the local level to promote healthy tobacco-free education and policies for local schools.

Barriers: Local board of health and board of education members are generally busy, active people. They must first be educated about the potential for success of such partnerships and the authority available to each to effect positive health changes among the children in their local schools.

Accountability and evaluation: State level BPH and DOE will be accountable for action plans to more effectively promote local partnerships between the local boards of health, county boards of education, school-based parent-teacher organizations, and others. Success will be measured by the increase in the number of these local partnerships that promote the coordinated school health

education programs (healthy lifestyles) and educational curricula within schools; the promotion of the Life Skills Program aimed at sixth-grade students; the number of local partnerships to expand efforts to target early childhood, primary, and secondary education to prevent the use of tobacco among our youth by assuring adequate time in schools to deliver a comprehensive school health education program; by the number of local partnerships to expand efforts to educate and support educators regarding the risk of tobacco use to themselves and assistance with tobacco use cessation, and by the number of local partnerships that work to assure compliance with the statewide tobacco-free policies for school property. Success will also be measured through routine DOE testing to measure the knowledge and performance progress of students regarding healthy lifestyles.

D. The WV state health care payers should develop incentives for covered West Virginians to curb tobacco use, and re-evaluate plan inclusion of coverage for effective pharmaceutical products that aid in tobacco use cessation.

Barriers: One barrier that could be faced is the feeling that promoting tobacco-use cessations is not the responsibility of state health care payers such as PEIA, Children's Health Insurance Program (CHIP), or Medicaid. Time to effectively plan and complete this activity might be seen as taking precious time away from other administrative responsibilities. The cost savings over time is important information for the agencies to have. Agencies may also be concerned about the cost of incentives. Adequate cost analysis should be developed along with the plan for incentives.

Accountability and evaluation: The WVBPH will be accountable for initiating discussions with these state payers and will provide their expertise regarding the effects of tobacco usage and ETS, and models of successful tobacco cessation incentive programs. The state health payers will be accountable for determining and implementing appropriate programs. Success will be measured by the creation of PEIA and Children's Health Insurance Program (CHIP) premium incentives for non-tobacco users and tobacco free households by 2001 and a Medicaid Program incentive and education program developed and implemented by 2001.

E. The West Virginia Legislature should create and pass legislation to curb the use of tobacco among West Virginia's children, making tobacco products harder to obtain by causing a significant increase in the retail cost of tobacco products.

Barriers: Tax increases are not generally popular with the general public. However, it is well documented that increasing the cost of tobacco is one of the best ways to restrict access to it by kids. West Virginia is the only state that does not impose a tax on spit tobacco.

Accountability and evaluation: Accountability for educating the state legislature regarding the risk of tobacco to youth and the benefits of an increase in the cost of tobacco products is that of the BPH. The state legislature is responsible for educating themselves and for enacting legislation to protect the state's children from tobacco use. Success will be measured by legislated tax increases or other means of increasing the cost of tobacco to children.

F. Permitting funds availability, the West Virginia Legislature should allocate funding from the West Virginia Tobacco Settlement Medical Trust Fund and/or the West Virginia Tobacco Settlement Fund, in at least the amount of the minimum funding estimates listed below, to fund the WV Tobacco Control Program.

Barriers: A significant collaborative relationship must be developed with the stakeholders. A tremendous diversity of opinion about how to spend the tobacco settlement fund revenues will occur. Extensive information and education on successful interventions to reduce tobacco consumption will be essential. Every effort must be made quickly by the WVBPH to educate decision makers, to

resolve differences of opinion, and to come together with solid support for a comprehensive campaign to cut tobacco use.

Accountability and evaluation: The West Virginia Legislature should challenge the Bureau for Public Health to invite the Tobacco Free West Virginia Coalition to help design a five- year statewide plan to reduce tobacco use and exposure to tobacco smoke among all West Virginians. The plan should include specific measures of program success. Success will be measured by the request from the state legislature leadership to the BPH for a collaborative approach to design the statewide tobacco control plan. Submission of that plan to the leadership, along with evidence of 75% support from coalition members, will be evidence of success.

Cancer Control in West Virginia

I. BACKGROUND

Many forms of cancer are preventable. They are directly or indirectly attributable to unhealthy lifestyle behaviors and environmental conditions that plague West Virginia people. In addition, many cancers are curable if detected early enough to institute appropriate and available treatments. According to the American Cancer Society, *“The biology of cancer has important implications for cancer control. At the cellular level the problem is faulty genetic control; cancer is basically a genetic disorder. But hereditary cancers such as retinoblastoma are uncommon. Instead the disease is usually acquired from external influences which are, therefore, potentially avoidable.”* The National Cancer Institute says *“Cancer develops gradually as a result of a mix of complex factors related to: environment, lifestyle, and heredity.”* Eighty percent of all cancers are related to the use of tobacco products, to what we eat and drink, or, to a lesser extent, to exposure to radiation or carcinogens in the environment.

Speaking generically of “cancer,” the American Cancer Society defines it as malignant tumors that are morphologically abnormal under the microscope. They show uncontrolled growth leading to local invasion with disruption of tissues, and later metastasis or spread to loco-regional lymphatics and later the blood stream. Cancers kill mostly through blood-borne metastasis. Because most (but not all) cancers are preventable, curable, and treatable, and because they extract a heavy toll emotionally and financially from our state, we must vigorously attack this health problem. Cancer is a public health problem for West Virginia that requires the close collaboration of public health and medicine.

By the year 2000, in North America, it is predicted by the American Cancer Society that one in two individuals born during the last decade will experience cancer at some point in their lifetime. One in four to one in five North Americans will die of cancer, and most individuals in North America will have some experience of the disease, either personally, or with a family member or friend.

According to the American Cancer Society the risk factors that are implicated currently in the causation of cancer include the following:

- Smoking
- Dietary Factors
- Obesity
- Exercise
- Occupation
- Genetic Susceptibility
- Infectious Agents

- Reproductive Factors
- Socioeconomic Status
- Environmental Pollution
- Ultraviolet Light
- Radiation
- Prescription Drugs
- Electromagnetic Fields

A study conducted by Amy Sarver and Dr. Edward Keller at West Virginia University as a Biology 209 Special Problems topic investigated cancer mortality rates in WV covering the years 1959 to 1994, by sex. The study showed a continuing increase in mortality for both males and females. However, the actual incidence of cancer is a more accurate determinant of the disease and can only be identified by a statewide cancer registry program.

In 1991 the WVBPH conducted a feasibility study to determine the need, and potential, for establishing a cancer registry in West Virginia. That year, funding became available from the CDC-funded WV Breast and Cervical Cancer Screening Program, and a cancer data registry related to those two cancers became a reality. In 1992, the state legislature called for, and funded, the statewide cancer registry. By 1993 data on most types of cancers were being collected. In 1994 the CDC bolstered the state cancer registry by adding funds totaling around \$400,000. By 1996 WV had developed a fairly clear picture of the incidence and associated mortality to West Virginians from cancers. More than 11,000 cases of cancer are reported in West Virginia each year.

The Burden of Cancer in West Virginia. Cancers exert a tremendous burden on those afflicted, as well as on their families and loved ones. Cancer survival can be a long and tedious effort with pain and illness resulting from the treatments as well as from the cancer itself. However, the risk of getting many cancers may be lowered by living a healthier lifestyle, (e.g., tobacco use is directly related to certain cancers). Many cancers can be treated effectively and cured if discovered early enough. In fact, all of the four leading causes of cancer mortality in the West Virginia population can be treated effectively if discovered early. Therefore, to reduce the morbidity and mortality of cancers in West Virginians, it is imperative that sufficient resources are directed toward prevention and early detection.

The financial cost of cancer is measured in three categories. Direct costs result from the use of resources for medical care to prevent, diagnose, and treat illness and disease, and for the continuing care, rehabilitation, and terminal care of patients. Indirect costs come from the loss of resources, the time and productivity lost by the patient, family friends, and others involved from employment, volunteer activities, leisure, and housekeeping. Psychosocial costs come from reduced quality of life from disability, suffering, and pain. According the National Institutes of Health, the economic costs of cancer in the U.S. in 1990 included the following:

Economic Cost of Cancer in the U.S.A., 1990

Type of Cost	Amount (Millions)	Percent Distribution
Total	\$96,126	100%
Direct	\$27,458	28.6%
Indirect	\$68,668	71.4%
Morbidity	\$9,895	10.3%
Mortality	\$58,773	61.1%

Direct Cost of Medical Care for Cancer, U.S.A., 1990, by Type of Service

Type of Service	Expenditure for Medical Care (Millions)	Percent Distribution All Services
All Services	\$27,458	100%
Hospital Care	\$17,935	65.3%
Physician's Care	\$6,613	24.1%
Nursing Home Care	\$1,333	4.9%
Drugs	\$1,068	3.9%
Other Professional Services	\$509	1.9%

Leading Causes of Cancer Mortality in West Virginia. The four leading causes of cancer mortality in West Virginia between 1993-1996 were

- lung cancer (65.7 deaths/100,000 population)
- prostate cancer (22.6 deaths/100,000 males)
- colon cancer (16.6 deaths/100,000 population)
- breast cancer (13.9 deaths/100,000 females)

For all cancer sites combined there are 225 deaths per 100,000 WV males and 155 deaths per 100,000 WV females.

What Can Be Done to Control Cancer in West Virginia? WV has many partnerships and coalitions already involved in addressing cancer problems within the state. What is needed, the WVBPH determined, is a comprehensive cancer control program. This would require a strong collaboration between medicine, public health, and environmental science. West Virginia must build its surveillance capacity at the local level and its scientific infrastructure at the state level to be able to adequately determine and identify the causes of environmental cancers (and other chronic diseases). Take as an example the incident of the formaldehyde spill from a railroad car that recently occurred in Cabell County. The spill affected four homes and one public swimming pool. The public health system worked extremely well pulling together the local, state, and federal response team. The risk of exposure was quickly determined, evacuation and site cleanup overseen. However, the lack of available state-level scientific knowledge as to when it would be safe to return to the contaminated areas posed a problem.

How can a comprehensive cancer control, coalition-based, program work? It would provide an integrated approach to reducing cancer incidence, morbidity, and mortality through five avenues:

- Prevention
- Early Detection
- Treatment
- Rehabilitation
- Palliation

The coalition work will be accomplished in the following manner:

- Pulling together categorical programs that target and reach populations at risk for cancer
- Spearheading a comprehensive cancer coalition of organizations already directing resources to health behaviors known to put people at risk for cancer
- Developing ways the existing initiatives and surveillance systems can collaborate to target other cancer concerns

- Specifying goals and performance indicators for the cancer control plan
- Developing comprehensive information and education programs targeted at health professionals and the public

Prevention activities would center on the behaviors of West Virginians that most likely put them at risk for one or more cancers. These behaviors include sedentary lifestyles, inadequate diet/nutrition, tobacco use, exposure to ultraviolet radiation and sexual health. Early detection of cancer can and will make the difference between life and death. Cancers especially susceptible to cure with early detection include cancers of the breast, cervix of the uterus, prostate, colon and rectum, and skin and melanoma. Only by collaborating in the development and implementation of a cancer plan can the numerous agencies, organizations, health care payers, health care providers, and researchers truly address cancer in WV with a comprehensive approach. Not only will effective population-based measures for health promotion/education and early detection be identified, but the very personal concerns of those afflicted can be met with scrutiny and potential resolution. Financial and geographic access to care, treatment, pain control, resources for survivors, and end of life resources such as hospice and pain relief can be identified and serve as information for health policy development for the state.

II. POLICY RECOMMENDATIONS, BARRIERS TO IMPLEMENTATION, AND ACCOUNTABILITY AND EVALUATION

A. The WVBPH should establish a cancer control coalition, bringing together medical and other health professionals, environmental scientists, existing coalitions and organizations addressing cancers, and other essential partners to develop a comprehensive plan for cancer control in West Virginia.

Barriers: The idea of a comprehensive cancer coalition is new. Traditionally, cancers have been fought one site at a time. In medicine, environmental studies, and public health programs, research and public education has often been directed at specific sites, types, or causes of cancers. Some examples of these are breast and cervical, skin cancer, colorectal cancer, prostate cancer, leukemia, tobacco use, and oral cancer. If there is no authority to require the collaboration of private entities working on cancer issues; turf issues will arise. Concerns about the risks of losing site-specific research funding might be a problem for some. Individuals and organizations dedicated to a specific cancer problem may have difficulty seeing the value of coalition work to their specific issue. However, the WVBPH has established its reputation statewide for developing and working effectively with coalitions.

Accountability and evaluation: Accountability for initiating an effective coalition lies with the WVBPH. It will be essential to bring to the table the chemical industry, the National Institute of Cancer Studies (NICS), environmental health researchers, medicine, nursing, dentistry, as well as other agencies, associations, and organizations dealing with cancer issues. Success will be measured by establishment of the comprehensive coalition before the end of the year 2000 and development of a blueprint (design) for a comprehensive cancer control plan by the end of the year 2001. With such progress, WV could be positioning itself for potential federal funding for development of a comprehensive plan.

Success will also be measured by the state's ability to measure up to the forthcoming national performance standards for state health departments found in ASTHO Draft, State Public Health System Performance Assessment Instrument, Interim Version, 5/19/99, in particular,

Essential Service #4: Mobilize Partnerships to Identify and Solve Health Problems

Indicator 4.1 State-level constituency building and facilitation of partnerships

Indicator 4.2 Expertise and capacity for constituency building and partnership facilitation

B. The WV Legislature should continue its support for cancer treatment through the WV Breast and Cervical Cancer Diagnostic and Treatment Fund.

Barriers: West Virginia still has a significant population who is uncovered by third party insurance. Especially with the growth of less-than-full-time service industry jobs, many citizens are left without coverage for treatment once they discover they have breast or cervical cancer. Early diagnosis is important only if treatment is available. The state legislature made a courageous choice to tackle this problem in 1998.

Accountability and evaluation: Accountability for continued funding lies with the state legislature. Accountability with measuring the results of those expenditures lies with the WVBPH. Success will be measured by the continued legislative appropriations. Success will also be measured by reports from the BPH as to the number of citizens served and the types of cancers diagnosed and treated with these dollars. The trends in mortality rates associated with breast and cervical cancer in the state should be monitored and reported.