

**Vermont State Health Plan  
2005**

**Part 2: A model for lifelong prevention and care**

## ***The Model***

*Outcome desired:* A holistic approach to health systems planning integrates the full continuum of services, recognizes the multiple dimensions of health, promotes collaboration and coordination, and is dedicated to high quality service delivery for all Vermonters.

*Action needed:*

- Adopt the model as the primary planning tool to set goals and develop strategies for health systems.
- Require that all proposals related to health services address the multiple components of the model and the impact of those proposals on other entities or sectors. Realign current services to be consistent with the model.
- Use the model to ensure full integration of all health-related activity, including the continuum of services from prevention through palliative care and to address acute, chronic and disabling conditions, mental health, oral health, and, substance abuse.
- Ensure that the policies for the delivery and payment of care are supportive of the desired outcomes of the model.

*Background*

The current health system can be characterized by its qualities of fragmentation, inequitable distribution of resources, innumerable inefficiencies, and other problems, all of which contribute to the high cost and unacceptably low level of quality in health care. The Institute of Medicine (IOM) cites numerous examples of fragmentation between primary care physicians and specialists, hospitals and long-term care, insurance policies and health care goals.<sup>1</sup> The poor coordination between the public health system and the health care establishment can be added to this list. In a health care economy that currently accounts for 13 percent of the gross domestic product, less than three cents out of every health care dollar is spent on public health. Specialty care commands greater resources than primary care. Duplication in tests, failure to provide needed care in a timely manner, and inappropriate care and error all lead to higher costs.

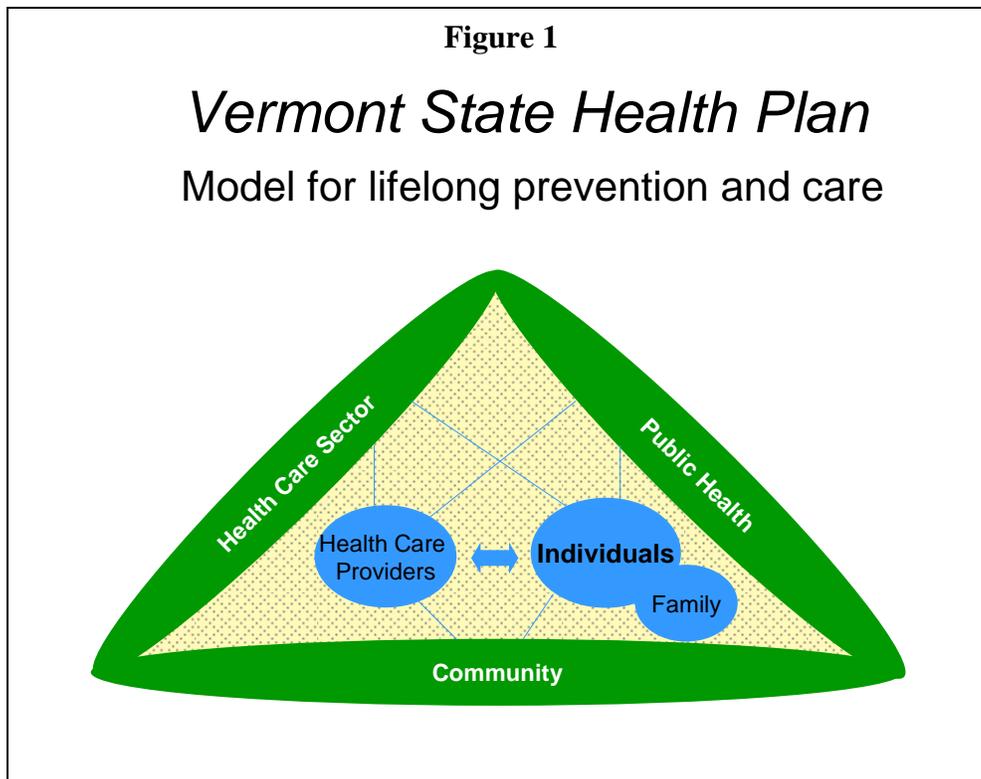
The values that guide this Vermont State Health Plan require a holistic approach to change the health care system. We can no longer afford the piecemeal approach to health that separates physical health from mental and oral health; that allows public health and health care to work in isolation from each other; that pays the same for poor care as for good; that fails to include the individual as a full partner in care; and that fails to hold organizations and individuals accountable for their failures to promote better health, provide better care, or adopt healthy behaviors.

The Vermont State Health Plan’s “model for lifelong prevention and care” provides a common language and frame of reference for planning and change that will lead Vermont to a unified health system. It combines the collaborative models of public health, the chronic care model of clinical health care and the recovery model of mental health and substance dependence. The model as presented in this state health plan is applicable to the entire continuum of care from

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<sup>1</sup> Institute of Medicine. *Quality Chasm*. Pages 2-4.

prevention and health promotion through primary care, treatment services and end-of-life care. Each sector will have greater or lesser role, depending on the issue presented, patient need or service. All, however, must be in place, aligned and supported to achieve the vision of healthy Vermonters living in healthy communities.



Central to the model (See Figure 1) are the people who receive and deliver health services. The literature consistently supports the patient-provider partnership as being essential for achieving the best health care outcomes in management of chronic conditions, with the family as an essential source of support. It is equally important in the prevention of those conditions, in decision making about long-term or end-of-life care, and in complementing the delivery of acute care services.

Three key organizational sectors facilitate (or limit) the provider-individual partnership and the overall effectiveness of health services. These are the health care sector, where policies are set and the availability and delivery of services are controlled; the community, which encompasses the people, institutions and services that provide social identity and support attitudes and behavior about health, both good and bad; and public health, which focuses on population health and is responsible for development and implementation of policies and services to prevent health problems, and to regulate, influence or support the actions of the other groups in the model.

For a well-functioning health system, a comprehensive, integrated information system that links each component of the model with all other components is essential. Health information is an essential management tool, key to effective communications, and provides the data to monitor and evaluate the performance and quality of the system as a whole.

While the model assigns entities to the various sectors based on their major contributions to the system as a whole, it is important to note that each of the entities share interest and services with other sectors of the model. Examples:

- Hospitals are major providers of community-based health services and their staffs are health care providers.
- Public health professionals facilitate community action and are providers of service to individuals in high-risk populations.
- Businesses purchase health care, but also offer worksite programs and support programs in their communities.

### ***Individuals and Families***

Individuals are the Vermonters whose personal habits, health beliefs and use of the health system influence their own state of health and their health care choices. Various referred to as patients or consumers, individuals are the primary “units” that affect and are affected by the health care system as a whole. The services they receive, the choices they make and the environment in which they live have a profound impact on their health status and, in turn, on the cost of care to themselves and to society as a whole. Families are often the most powerful influence on individuals, the health choices they make, and their ability to change. Family members often assume the primary individual decision-making role on behalf of their children and others unable to exercise this role for themselves.

Traditionally, individuals have tended to seek health care only when faced with a problem not amenable to home remedies. The role of the health provider has been to “heal” the problem or alleviate the suffering associated with it. In modern society, where chronic disease is the most common problem, prevention and treatment occur primarily in the home and community. To become effective as their own care givers, individuals must become better self-care managers. This requires knowledge of the health choices that will help prevent or manage personal health conditions. It requires the skills to make those choices and implement them and the confidence to be responsible for their own care. It requires the motivation to take that responsibility, as well as the ability to cope and to solve problems inherent in implementing those changes and decisions. It also requires that the provider guide and support individuals to set and meet their personal health goals.

There are many choices that individuals must consider in light of their own beliefs and attitudes. In addition to personal behaviors and self-care management, individuals choose among alternative therapies (including no care), home care or nursing home care, and intensive treatment or palliative services. All of these individual choices require informed decision making that must be supported by the health care provider, health system and community if optimum health is to be achieved.

### ***Providers***

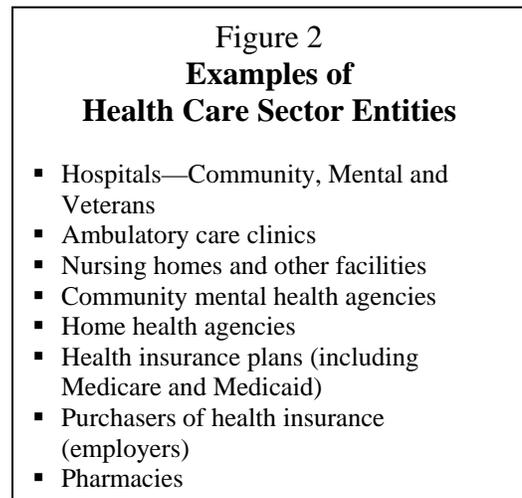
Providers are the physicians, dentists, nurses, counselors, therapists and other health care and public health professionals who work with individuals to guide, support and assist them to be healthy, and who deliver treatment and care when needed. In today’s world, the role of the provider has expanded from healer to include counselor and coach. Providers need to reorient

their traditional approaches and provide patient-centered, proactive (planned) care as the norm, with collaborative goal setting and shared decision making. This requires full integration of the chronic care model into practice, including the use of evidence-based guidelines that are shared with patients, and integration of these standards of care into all processes including reminders, call backs, care management processes and coordinated care management services.

Individual providers can no longer be the sole manager for the people in their care. Preventive services and management of chronic conditions requires a team approach across the health care system and within the community. Public health and social services must be fully integrated and coordinated with the work of providers and individuals.

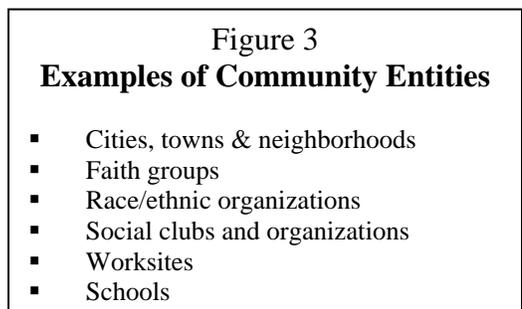
### ***Health Care Sector***

The health care sector includes the organizations and facilities that make the policies, establish outcome measures, implement procedures and provide the incentives that control what health services are available, and how health care is delivered by providers and received by individuals. The types of entities included in the health care sector are listed in Figure 2. Currently, components of the health care sector seldom function as a system; rather, they form a collection of organizations that may cooperate at times, but also likely to work independently. While the employers who purchase health insurance are not directly responsible for health care, they make the decisions regarding what options are available to employees and at what cost. Collectively these entities must create an integrated health system that promotes safe, high-quality health care.



### ***Communities***

The term “community” encompasses the physical and cultural settings that provide individuals with identity and that support attitudes and beliefs about health and health care. Communities have a key role in ensuring the availability of structures, facilities and services that support healthy behaviors as the easiest choice, that foster healthy living and that protect individuals from harm. Community organizations are not likely to view themselves as having a role in health, it is critical that they are made aware of this role and be given the tools and support to fulfill it. Examples of community entities are shown in Figure 3.



### ***Public Health***

Public health focuses on entire populations or population sub-groups rather than individuals. Historically, public health has been primarily addressed prevention of disease and early intervention. With the increased population with chronic conditions, greater attention is now being given to prevention of complications of disease as well. The public health system has three core functions: 1) assessment of the health status of the population and identification of problems; 2) development and implementation of policies that promote good health and empower communities; and 3) ensuring that people have access to high-quality health services.

Entities that provide public health services are shown in Figure 4. This list includes some whose public health role might not be obvious, but for example, the proper design and maintenance of roads and bridges by the Agency of Transportation is a critical element of population-based injury prevention. While most are government agencies, the private sector makes significant contributions to accomplishing public health goals. A few of these key groups that address issues of access, quality and education are noted here.

### ***External Forces***

Outside of the model are powerful entities that shape health and health care in the state. Local policy makers and planners must understand these forces and use them if we are to improve the health of our people. Vermont has a wide range of businesses and services that do not fall into one of the key sectors of this model and that may support the goals of this plan, or not. Examples include restaurants, fitness centers, sporting goods retailers, pharmacies, local media, and others.

Accomplishing the goals of this plan requires the participation of this plan are Vermont's academic and research institutions that educate health workers and develop the science on which practice is based.

Probably the most important external force is the federal government, which through funding and regulation has a profound impact on access to pharmaceuticals, utilization of services, and the financial health of Vermont's health care organizations. The mass media in the United States often promotes unhealthy lifestyles without acknowledging the consequences. As such, it is a major force in determining health behaviors.

**Figure 4**  
**Examples of**  
**Public Health Entities**

- Department of Health
- Department of Environmental Conservation
- Department of Labor and Industry
- Department of Banking, Insurance, Securities and Health Care Administration
- Department of Aging and Independent Living
- Agency of Transportation
- Public Safety/Law Enforcement
- Area Health Education Centers
- Vermont Program for Quality in Health Care
- Vermont Child Health Improvement Program
- Campaign to End Child Hunger

## **Individuals (Consumers, Patients)**

*Patients must take responsibility for their own care. They should seek information from trusted sources [...] to learn what kind of preventive care or treatment they should be receiving, and then work with their physicians to ensure that they get recommended care. Patients should not assume that their physicians will remember all that needs to be done. They can help their physicians provide good care by being active advocates for it.*

First National Report Card on Quality of Health Care in America<sup>2</sup>

Outcome desired: Vermonters participate as full partners in improving personal and population health and health system outcomes by effectively managing their own health needs.

### *Action needed:*

- Engage people in taking an active role in their own health care through new programs, services and incentives.
- Refocus health education to promote skills development and behavior change, not just knowledge of health and health care; use coaching, teamwork, peer support and collaboration as strategies to support healthier behaviors.
- Expand the use and scope of shared decision-making tools and other methods that help consumers make informed choices about the treatments, programs and providers that will help them the most, in light of their own values and preferences.
- Expand peer-led resource, education and support programs in chronic care, mental health and substance abuse.
- Ensure that the consumer is informed about guidelines relevant to age and condition and that the care is customized according to the individuals' needs, values and priorities.
- Provide consumers with electronic access to personal health records and with the opportunity to communicate electronically with their providers.

### *Background:*

Whether engaging (or not) in a health promotion activity such as exercise, or living with a chronic disease such as asthma, an individual is managing. Indeed, "one cannot *not* manage; the only question is *how* one manages".<sup>3</sup> Full implementation of the model requires that individuals change how they manage their own health and how they use the health system. It requires that they become fully informed, assume responsibility for preventing ill health, share responsibility for deciding their treatment plans, and undertake the lifestyle changes necessary to prevent disease and/or reduce its complications.

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<sup>2</sup> Rand Corporation. *The First National Report Card on Quality of Health Care in America* May, 2004.

[Hhttp://www.rand.org/publications/RB/RB9053-1/H](http://www.rand.org/publications/RB/RB9053-1/H)

<sup>3</sup> Lorig KR, Holman HR. Self-Management Education: History, Definition, Outcomes, and Mechanisms. *Annals of Behavioral Medicine*. 2003;26:1-7..

## Health Education

To maintain their health and the health of their families, people rely heavily on the health information that is available, most of it in written form. Yet, nearly half of all American adults have difficulty understanding and using health information, and at some point, most individuals will encounter health information they cannot understand. Even well-educated people with strong reading and writing skills may have trouble comprehending a medical form or doctor's instructions regarding a drug or procedure. More than 300 national studies indicate that health-related materials cannot be understood by most of the people for whom they are intended.<sup>4</sup>

The consequences are significant. Our health often depends on our ability to understand a set of actions needed to prevent, manage and treat disease. These skills are needed to discuss problems and care with health professionals, for understanding patient information sheets, and for using medical tools such as a thermometer or glucose meter. They are also needed to evaluate the messages emanating from the mass culture of the United States where risky behavior without risk is routinely depicted, violence is entertainment, unhealthy foods and fad diets are promoted and “quick cures” for difficult health problems are routine. The ability to understand risk, proportionality and basic science is crucial to personal decisions regarding prevention and treatment of all health conditions.

Programs of health literacy, health education, and health promotion should be developed with involvement from the people who will use them, and all such efforts must be sensitive to cultural and language preferences.<sup>5</sup>

## Self Care (Patient Self Management)

The literature on self care or self management focuses almost exclusively on treatment of chronic disease, including mental health problems. It does, however, provide important guidance for all proactive, planned health care, most importantly preventive care and routine primary care. There is little difference in the skills needed to change behavior to prevent chronic conditions and in those needed to control its symptoms.

Effective self care is best achieved means that people and their families understand the condition or preventive health needs, learn self management skills, know when to seek help, know how to manage medications, and avoid situations that may aggravate their condition. It requires skills in practical problem solving, confidence in using management and monitoring tools, and the ability to define and carry out the goals of the care plan. Most of all, it requires a working partnership between the provider (e.g. physician, nurse, counselor) and the individual. The focus of education must include mutual problem solving with health professionals to maintain or improve health status. And because physicians and patients do not always perceive health or disease in the same way, it is important that health professionals communicate what successful management means in terms that people understand.

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<sup>4</sup> Institute of Medicine. *Health Literacy: A Prescription to End Confusion*. Washington DC: National Academies Press; 2004.

<sup>5</sup> Institute of Medicine. *Health Literacy*

There are many reasons why people may not succeed in controlling their chronic condition. Many people do not understand what is required to successfully manage their conditions. Others lack faith in their ability to do what they believe is required, or may not consider it a chronic condition at all. They may view disease episodes as acute illnesses, unrelated to an ongoing chronic disease process; or they may believe that the course of chronic illness is determined by fate rather than responsive to personal behavior. It is not uncommon for people to be overwhelmed and develop "all or nothing" attitudes about disease that prevent them from undertaking manageable moderate changes that would produce significant health improvements. Patients who have complex, difficult-to-manage conditions may require active outreach, special tools or supplies, and additional help to succeed with self-management strategies.

## **Shared (Informed) Decision Making**

People make health choices on a daily basis, based on their own values and preferences and often without thinking about the implications (e.g. what to have for a snack, whether to use a seat belt, when to make a doctor's appointment, when to go to the emergency room with chest pain). When they do seek medical care, they very often leave complex medical decisions to their physicians. Shared decision making is an effort to help people understand their options thoroughly and make those choices themselves.

No one treatment is right for all people. Research indicates that well-informed patients, who play a significant role in deciding how they will treat or manage their health condition, feel better about the decision process. Their decisions are more likely to match up with their own values and concerns, they are more likely to stick with the option selected, and they feel better about their health and health care as a result.<sup>6</sup>

## **Support Systems**

Whether changing behaviors to prevent disease and injury or managing a short-term or chronic condition, it is difficult for any individual to manage sustained change alone. We all live within family, community and cultural contexts that make change extremely difficult. Recognition of this is but the first step. Also required is the active support and participation of others to adopt those changes.

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<sup>6</sup> Foundation for Informed Medical Decision Making. *Shared Decision Making*. [Hhttp://www.fimdm.org/shared\\_decision\\_making.php](http://www.fimdm.org/shared_decision_making.php)H

## **Providers (Workforce)**

*Outcome desired:* Health care practitioners in Vermont provide comprehensive, proactive health services and guide patients to become full partners in their own care, in an integrated, cooperative and supportive environment.

*Action needed:*

- Develop a comprehensive provider database to monitor supply of health care providers, predict needs, develop priorities and target specific actions.
- Investigate the feasibility of a coordinated workforce partnership to promote education in the health professions and manage recruitment and retention services.
- Ensure that resources are deployed and training provided so that all health professions have the opportunity to reorient their delivery of services to be more proactive.
- Ensure continued competency of providers in their chosen profession, including assistance to better provide culturally competent, patient-centered, collaborative care.

*Background:*

The health care sector employs over 41,500 people in Vermont or about 8.8 percent of all workers, making it the largest employment group in the state. Ten of the top 50 employers in the state are in health care, including hospitals and community mental health and home health agencies. In most Vermont labor market areas, health care organizations are among the top five employers. Approximately 10,350 people work in hospitals, 6,850 in nursing homes and residential care facilities and 16,100 in ambulatory care.

A well-staffed, highly skilled health professional workforce is essential to a well functioning health system. Vermont can be proud of the skill of its health services workforce. We are among the “best in the nation” on many measures of health status and health care, but we are vulnerable on many fronts. A shortage of nurses, dentists, psychiatrists and other providers means that often Vermonters go without care or receive less intensive care than they might need. The highly collaborative approach to health services envisioned in the model espoused in this plan will require changes in roles, training, practice and staffing patterns for all health professionals.

### **Health Professions’ Shortage**

Vermont is already experiencing a shortage of key health professionals, including physicians, dentists, nurses, mental health and substance abuse counselors, and public health workers. In nursing and dentistry, a significant proportion of the existing workforce is nearing retirement age. Recruiting and retaining skilled people is difficult throughout Vermont, but is especially difficult in the rural parts of the state.

The Healthcare Workforce Development Partnership (the Partnership), a task force made up of representatives from academia, health care organizations, businesses, public health, employment department, and the legislature, has identified 20 health professions with significant problems in

recruitment and retention in Vermont. The Partnership relied on existing data for its report; as a result, it does not include many key sectors of the health workforce, including those employed in schools, mental health, and substance abuse or public health agencies. See Chapter: Data Summary, Workforce. Its report includes findings and recommendations for each of these areas.

The Partnership also reports five overarching observations, applicable to all health professionals.

- There is an inadequate understanding by youth and the general public of the career opportunities in the health professions. As a result, youth may be unaware that a career in healthcare would be well suited to their skills and aspirations.
- Non-traditional students are highly valued by employers in the health field, yet efforts to reach this population of potential workers are poorly organized.
- Data on the supply and demand (need) for the various health professions is inadequate in all respects.
- The majority of Vermont health care institutions lack adequate resources to develop and maintain comprehensive human resources departments to provide necessary recruitment and retention services.
- The health care environment is changing faster than the system can adapt, making it extremely difficult to assess the relative importance of various factors apparently impacting the demand for care, such as reimbursement policies, new treatment modalities, and the aging of the population.

An inadequate supply of key health professionals would pose a significant challenge to a more collaborative, proactive health system. A shortage of nurses, mental health counselors or substance abuse counselors would make it more difficult for them to take on expanded roles in patient education and care management. Such shortages may require a reexamination of their scopes of practice and those of other professions, and/or development of new health professions, to ensure that new service needs can be met.

## **Proactive Planned Care**

The model for lifelong prevention and care (Figure 1) envisions in addition to an informed, activated individual (consumer or patient), a prepared proactive provider or practice team. The two must develop a partnership to achieve improved health outcomes. This partnership also forms the foundation of the Vermont Blueprint for Health and the Chronic Care Model.<sup>7</sup>

The current delivery of health services has evolved to provide care for people with short-term (acute) or episodic health needs. As such, it responds well to demand for care, and is usually characterized by the physician in a leadership or healer role. Unlike acute or episodic care, prevention and management of chronic conditions requires that services be:

- proactive—provided before symptoms develop
- planned—follow an agreed to schedule with clear objectives for outcomes, visits, tests, medication, behavior change, and other interventions

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<sup>7</sup> Institute for Chronic Illness Care. *Chronic Care Model*. [Hhttp://www.improvingchroniccare.org/H](http://www.improvingchroniccare.org/H)

- within a continuous relationship—seeing the same primary care and other services providers over time to develop trust and understanding.

This new approach to delivery of health services requires that physicians and other health care providers have access to a range of training and support services to help redesign the clinical/office management systems; to ensure a seamless transition between primary care and specialty care providers; to develop a collaborative care model within their practices that is patient centered and empowers the patient to make effective decisions regarding their own care; and to have information systems that support the new office and care systems.

At present, there are no revenue sources to support these changes at the practice level. The health care sector, public health (government) and others must identify and deploy resources that will allow the needed changes to take place.

## Person-Centered Care

“Person-centered care” is also known as patient-centered, consumer-centered, personalized or individualized care. Person-centered is the term selected here because it is inclusive of prevention and wellness services as well as illness care. Person-centered care means that physicians, dentists, mental health and other providers treat individuals as partners, involving them in planning their health care and encouraging them to take responsibility for their own health. The old way of telling people what they need to do (and admonishing them or calling them “non-compliant” if they don’t) has proven to be a failed strategy. In one study, more than half of people surveyed reported not taking their prescribed medication; the authors estimated that 6 percent of hospitalizations could be traced to “non-adherence.”<sup>8</sup>

Person-centered care includes respect for the individual’s values, preferences and expressed needs. It means providing people with information about their conditions and their options in terms that they understand; helping them to weigh their options and to participate in decision making; and guiding and supporting them in the decisions made. It is highly customized and includes cultural competence. Personalized care also attends to the individual’s emotional and spiritual dimensions, to relieve uncertainty, anxiety, and fear, and to promote the support of family and friends.

## Complementary and Alternative Medicine

Surveys suggest that nearly half of the adult population in the United States use Complementary and Alternative Medicine (CAM), and that CAM use increased by 25 percent between 1990 and 1997. This increase can be expected to continue: three of 10 of people in the pre-baby-boom generation report using CAM sometime in their life compared with five out of 10 baby-boomers and seven out of 10 in the post-baby-boom generation. Among users of CAM, 87 percent report having seen a medical doctor in the previous 12 months.<sup>9</sup>

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<sup>8</sup> R Lowes. Patient-Centered Care for Better Patient Adherence. *Family Practice Management*. March 1998. [Hhttp://www.aafp.org/fpm/980300fm/patient.html](http://www.aafp.org/fpm/980300fm/patient.html)H

<sup>9</sup> Kessler RC, Davis RB, Foster DF, Van Rompay MI, Walters EE, Wilkey, Kaptchuk TJ, Eisenberg DM. Long-term trends in the use of complementary and alternative medical therapies in the United States. *Ann Intern Med*. 2001; 135(4):262-268.

Person-centered care requires an understanding of the patient's use of non-traditional treatments and an assessment of the benefits and potential harms that may ensue. The premises upon which the various CAM practices are based, such as nature, vitalism, science and spirituality, offer people a participatory experience of empowerment, meaning and enlarged self-identity when illness threatens their intactness and sense of connection to the world.<sup>10</sup> While most CAM practices have not been studied, there is evidence of effectiveness for some. There is also evidence that some therapies can have unintended consequences, when used alone or in combination with prescription drugs and other traditional therapies.

In a recent study, patients using both traditional medicine and CAM reported on their perceptions. Only 21 percent agreed with the statement that "alternative therapies are superior to conventional therapies" and 79 percent agreed that "using both conventional and alternative therapies is better than either one alone." That said, 63 percent reported that they did not disclose use of at least one of their CAM therapies when they saw their medical doctor. The most common reasons cited for non disclosure were "it was not important for the doctor to know" and "the doctor never asked."<sup>11</sup> This suggests that use of CAM is not due primarily to dissatisfaction with conventional medicine, and that better understanding of its use and collaboration with CAM practitioners' offers the provider of traditional care insight and opportunity to better serve his or her patient.

## Health Professions' Education

As noted throughout this document, the most important health issue as we enter the 21<sup>st</sup> Century is the prevention and management of chronic conditions. Chronic conditions account for 76 percent of all physician visits and 81 percent of in-patient stays.<sup>12</sup> This requires a change in the nature of care and requires a coordinated team of health providers (e.g. primary and specialty physicians, pharmacists, educators, case managers, social workers). The role of the patient is changed because it is the patient who now is the principal caregiver in treatment. The role of the physician is changed to that of guide and advisor, sharing decision-making authority and setting goals with the patient.

Education and training for health professionals must incorporate these changes. The knowledge and skills needed to help people prevent and manage disease, to accept the individual (patient) as the primary caregiver, to work as a member of a team, and to share the decision-making role, must be in the core curriculum for all health professions. Further, providers need a better grounding in the integration of population-based public health and the role of communities in clinical care. Educational programs for many of the professions already include these concepts in their programs, but far more needs to be done.

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<sup>10</sup>Kaptchuk TJ, Eisenberg DM. The persuasive appeal of alternative medicine. *Ann Intern Med.* 1998; 129(12); 1061-1065.

<sup>11</sup> Eisenberg DM, Kessler RC, Van Rompay MI, Kaptchuk TJ, Wilkey SA, Appel S, Davis RB. Perceptions about complimentary therapies relative to conventional therapies among adults who use both: results from a national survey. *Ann Intern Med.* 2001;153:344-351.

<sup>12</sup> Partnership for Solutions. *Chronic Conditions: Making the case for ongoing care.* Johns Hopkins University. September 2004. H<http://www.rwjf.org/files/research/Chronic%20Conditions%20Chartbook%209-2004.ppt>H

## **Maintaining Competency**

Vermont regulates more than three dozen occupations and professions. In many areas such as medicine, an applicant's education, competence and proficiency must be demonstrated before licensure, but continuing education is not always required, nor is competency in all cases re-evaluated when licenses are renewed. Government regulation provides a significant level of safety, but the protection is far from absolute. Incompetence or lack of training can create health risks in many professional areas, including health care.

Achieving the goal of having providers use available evidence-based standards to guide treatment decisions will require education, new tools, health information systems and other forms of support. Proven change modalities must be identified and employed.

As discussed in the information technology section of this document, the lack of practice-level administrative supports to record, collect and report information about patients and to provide feedback to physicians is a barrier to high quality health care. Fixing this problem will require major infrastructure development as well as training on the part of health care providers at all levels.

Education and training for health professionals must also incorporate cultural competency. Providers frequently need to communicate with patients with whom they do not share common languages or cultural backgrounds. Culture, ethnicity and poverty influence both providers' and patients' perceptions of health, illness, and the risks and benefits of treatments. Differences in economic, cultural and educational backgrounds between a patient and provider also contribute to problems in comprehension on the part of both parties.

## Health Care Sector

*Outcome desired:* Vermont health care organizations collaborate in the redesign of service delivery to ensure the efficient delivery of comprehensive, high quality prevention, treatment and care services to all Vermonters.

*Action needed:*

- Organizations within the health care sector must align their internal policies and procedures, including those related to funding, to support and ensure improved quality of care.
- Payments and other incentives must promote and reward high quality care that is consistent with evidence-based practices and good health outcomes. This effort requires the full participation of purchasers, health plans and others, and must address comprehensive prevention, screening and early intervention services for mental health, substance abuse, and oral health.
- Improve coordination among entities within the health care sector, including primary and specialty care, disease management services, and the systems by which individuals are transferred and transitioned among hospitals, long-term care facilities, treatment centers and the community.
- Ensure the availability of community-based services that support care in the most integrated, least restrictive community settings possible.

*Background:*

The health care sector is large and complex (Figure 5). Including the providers of care, health care sector makes up more than 97 percent of the total health care economy in the United States, with public health accounting for the remaining 3 percent.<sup>13</sup> In Vermont, health care spending totaled \$2.8 billion in 2002, an increase of 10.8 percent since 1998.<sup>14</sup> While there is much Vermont can do to improve the system for health care in the state, there is also a large component of the industry over which the State has little control. Pharmacy regulation is the responsibility of the federal Food and Drug Administration, for example, Medicare funding is controlled by Congress, and “self insured” employers are not subject to State regulation.

**Figure 5**  
**Examples of**  
**Health Care Sector Entities**

- Hospitals—Community, Mental and Veterans
- Ambulatory care clinics
- Nursing homes and other facilities
- Community mental health agencies
- Home health agencies
- Health insurance plans (including Medicare and Medicaid)
- Purchasers of health insurance (employers)
- Pharmacies

<sup>13</sup> Centers for Medicare and Medicaid Services, Office of the Actuary. *National Health Care Expenditures Projections: 2004-2014*. [Hwww.cms.hhs.gov/statistics/nhe/projections-2004/proj2004.pdf](http://www.cms.hhs.gov/statistics/nhe/projections-2004/proj2004.pdf)H

<sup>14</sup> Vermont Department of Banking, Insurance, Securities and Health Care Administration. *2002 Vermont Health Care Expenditure Analysis and Forecast*. [Hhttp://www.bishca.state.vt.us/HcaDiv/Data\\_Reports/expenditure\\_analysis/expend\\_analysis\\_2002\\_initialrel.pdf](http://www.bishca.state.vt.us/HcaDiv/Data_Reports/expenditure_analysis/expend_analysis_2002_initialrel.pdf)H

## **The Health Care System**

A system is defined as a set of institutions and processes that function together to achieve defined objectives. The entities that make up health care function as a collection of organizations that often coordinate and work together, but are also likely to actively compete and/or work independently of one another. This fragmentation leads to duplication, waste, inefficiency and lost opportunity that Vermonters can ill afford. Individually and collectively, health care sector entities must begin to create a culture and develop strategies that promote safe, efficient, high quality health care. These strategies may include such things as provider incentives, the setting of measurable goals for care in the business plan, senior leaders visibly supporting improvement, the use of proven strategies for comprehensive system changes, the promoting of prevention and early intervention services through benefit packages, the open handling of errors and quality problems, and the development of agreements that facilitate care coordination within and across organizations.

## **Markets and Regulation**

The entities within the health care sector include private for-profit, private non-profit and public organizations. Some, such as hospitals and health insurers, are highly regulated; others, such as ambulatory care services, have little or no regulation. Some market sectors, such as pharmacies, are highly competitive, while entities such as community mental health and home health agencies have virtually no competition. With the exception of more urban locations, effective competition does not exist in much of the state.

Government plays a major role as insurer for low-income and elderly individuals through the Medicaid and Medicare programs. The extent to which regulation and/or competition contribute to the overall cost of, and access to, health care is the subject of much debate. In general however, the Vermont population is probably too small and too rural to sustain a competitive market among larger health institutions.

Unlike other markets, the health care market must ensure the continued availability of services that have a low return on investment or even operate at a loss, and must provide services to those who cannot afford them. Future laws and regulations designed to control costs and expand access to health care must take into account the need to share this burden.

## **Cost Control**

In our society, high value is placed on the market economy and market solutions to problems. Yet, those values are directly in conflict with the values of equity, quality and accessibility to the full range of health care services for everyone. If selling flu vaccine were profitable, there would be no shortage of companies manufacturing and distributing it and the loss of one manufacturer would be a minor event. As it is, this life-saving strategy represents yet another high-cost, low-volume item, needed only once a year, and with up to 20 percent of the supply discarded each year because of low demand. Without the social and health imperative, it is doubtful that flu vaccine would be available at all.

With our reliance on employers to provide health and dental insurance, the customer/patient has little to say about priorities or preferences, and even less incentive to “invest” his or her effort in

strategies to reduce costs. Work must be done to empower and involve consumers in taking a more active role in their own care.

We also place high value on preventive services, but are unwilling to cover the expense, in part because the return on investment may not be realized for years, and sometimes decades. The physician who provides top quality care is paid at the same rate as the one who provides substandard care. The cost of improving care is borne by one entity, the reward accrues to another. Realignment of the incentives for providing and paying for preventive care and for higher quality care will be needed to effect real change in the system.

There are several factors at work that can be expected to significantly increase the demand for free, low-cost and/or subsidized services for Vermonters. These include an increasing number of businesses offering higher cost or higher co-pay insurance plans, or no health or dental insurance at all. They also include private providers limiting their participation in the Medicare and Medicaid programs as reimbursement rates are reduced in response to increasing costs.

A comprehensive approach to cost containment that increases the value generated by expenditures across all entities is essential. In the long run, effective cost management will require more and better information, a commitment to improved quality, a greater emphasis on prevention services, consumer commitment, and community support. It will also require a concerted effort to identify and eliminate waste in the delivery and administration of health care. In the shorter term, attention to areas of high utilization and high cost, such as emergency department use, chronic disease care and avoidable hospitalizations, should be targeted for improvement. An examination of the revenue streams and pricing policies that impact total costs is also required, so that essential services are available to all.

## **Communities**

*Outcome desired:* Communities dedicate themselves to ensuring that the health of their members is of primary concern and that the healthy choice becomes the easiest and most acceptable choice in all aspects of community life from infrastructure design to individual support services.

*Action needed:*

- Adopt safety from injury, protection of the environment, and promotion of physical activity as criteria by which community transportation and development decisions will be made.
- Improve knowledge and understanding of health, health care and the role of the consumer through programs in schools, worksites, businesses and other community entities.
- Make available, within each community, services, programs and policies that promote and support wellness and reduce the likelihood of disease or injury. Examples: after-school programs; workplace safety programs; healthy food choices; alcohol-free events in public places; programs to prevent intimate partner violence, suicide and elder falls; and outreach to people in need.
- Make available, within each community, services, programs and policies that expand on and support the services of health providers, public health and the health care sector. Examples: outreach and job services for people with substance abuse or mental health problems, support groups for people with chronic conditions, family respite programs, and resource and referral services.
- Develop safe housing for people transitioning back from residential substance abuse or mental health care and from incarceration; adhere to policies that maximize housing opportunities for individuals with mental health and/or substance abuse issues and with mobility and other health-related limitations.
- Engage community members in the development of the local health care infrastructure and in the design of prevention and treatment services.

*Background:*

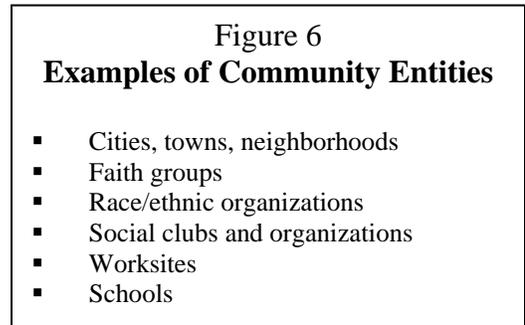
Achieving the goal of enabling Vermonters to lead healthy lives in healthy communities depends upon the willingness of individuals to take charge of their own health, but it also depends upon this taking place within in the context of active community participation. If the health of Vermonters is to be improved, it is imperative that communities understand their powerful position in promoting, supporting and protecting their members and colleagues.

Public health in Vermont has historically sought out opportunities to enhance community coordination in its response to public health needs. State and community coalitions have become the most common way to address a wide variety of issues such as access to care, improving birth outcomes and breastfeeding rates, and preventing child abuse and domestic violence. With respect to mental health and substance abuse, Vermont has a commitment to the use and further development of community-based care, supporting the most integrated community settings and

the least restrictive alternatives for care through access to affordable housing and to a full range of community-based treatment and support options.

## Community Support Services

Communities have a profound effect on public health. Individual behaviors and beliefs are to a large extent shaped by the communities in which people live, work and play, and which provide them with social identity and support. They are also the points of convergence for the interests of employers and businesses, the messages of the news and entertainment media, and the services of governmental public health agencies and the health care delivery system. The power of the community to support healthier behavior has been demonstrated in the decreased tolerance for drunken driving, smoking in public places, and in other matters. Similar changes in community attitudes can lead to healthier eating, earlier prenatal services, higher breast feeding rates, reduced access to illegal drugs and greater acceptance of people with mental health problems, to name only a few examples.



Community support also can have a significant effect on the speed with which individuals recover from illness, surgery or injury. The presence or absence of community support often contributes to the success or failure of an individual's efforts to adopt healthy behaviors or cope with chronic disease. "Support" may simply be community awareness of the nature of a disease and the understanding that people with chronic conditions can lead healthy lives. Support includes providing accommodations such as a space for a breastfeeding mother, seating for the handicapped or signers at town meeting. Support can be experienced as an educational program targeted to people with a particular disease to help them learn specific skills to better manage their condition.

The spectrum of community influence is virtually limitless. It may include increasing the nutritional quality of meals served at church suppers or in the worksite cafeteria. It determines municipal and club smoking policies. It can build sidewalks and trails that encourage exercise, or transitional housing for the mentally ill, recovering substance users or parolees at risk of substance abuse relapse. It staffs teen social centers that offer teens healthy alternatives. Community influence can support an open dialog to explore attitudes about end-of-life care, to model healthy roles for youth, or to link businesses and health programs. It sets school health policies and education, creates clinics for the uninsured, and sponsors classes and support groups for tobacco cessation or weight control.

Community support must be culturally, racially and ethnically sensitive to be effective. Outreach efforts often are income sensitive and must address the cultural identity of those who experience generational poverty. Individuals who are socially marginalized by gender or by minority racial, ethnic or sexual identification are often inadvertently left out of programs intentionally designed to reach the greatest number of people. Such programs tend to target the majority, reinforcing access problems for minorities.

Community-based services are essential to creating a supportive environment for improving health behaviors, yet health care providers and community leaders in our society tend to work independently of each other. Using the model (Figure 1), communities will be enlisted to offer a range of programs, services and infrastructure to enable people to lead healthier lives.

## **Infrastructure and Policies**

Communities also exert significant influence over the health of their citizens in the design of the community, in the decisions of the zoning board or the recreation department, and in other aspects of the environment. Efforts to promote physical activity are enhanced by sidewalks, trails and safe cross-walks. When stores are within walking distance of home, people are more likely to walk. The presence of a local farmers' market can promote the eating of more fresh fruits and vegetables.

As communities grow and spread beyond urban areas, most planning and design has taken place with too little regard to health. Attributes of the built environment and community design have a significant impact on social well-being and community engagement. Poor community design can isolate people, leading to a diminished sense of community and can contribute to distrust and detachment, which in turn can produce stress, one of the risk factors for many types of disease. Known implications on health that are associated with land use and development include air and water quality, sanitation, rates of physical activity, bicycle and pedestrian injuries, mobility and quality of life for elderly and disabled residents and mental health and social well-being.

Communities can make choices affecting the built environment that promote healthy behaviors. Regional and town planners can encourage safe streets and sidewalks or clearly marked bike/pedestrian lanes on rural roads. Commercial and public buildings can be designed to include easily accessible stairways, and signs can be added to promote stair use and encourage greater lifestyle physical activity. Promoting alternative modes of transportation and creating incentives to walking and biking can reduce air pollution and increase activity rates. Vermont's Act 250 and related laws have done a good job of protecting Vermont's air and water quality, and they provide for a review of transportation and other issues, but more can be done.

For people with special needs, welcoming attitudes and community support for special housing can greatly enhance their ability to lead healthier lives. Lack of safe and accessible housing can hasten the onset of illness or relapse for individuals with mobility limitations, people with mental health issues, people in recovery from substance abuse, and anyone with a chronic condition.

While almost all health care treatment and prevention efforts benefit from community support, some problems cannot be effectively addressed except at the community level. Several examples are outlined elsewhere in this document, including the prevention of suicide, intimate partner violence, and injuries related to falls by the elderly, to name just a few.

## **Public Health**

*The success or failure of any government in the final analysis must be measured by the well-being of its citizens. Nothing can be more important to a state than its public health; the state's paramount concern should be the health of its people.*

Franklin Delano Roosevelt

*Outcome desired:* Public health organizations collaborate in the redesign of a comprehensive, integrated health system to ensure availability of high quality prevention and treatment services in communities and health care.

### *Action needed:*

- Ensure that laws, regulations, public programs and public financing support the goals of this plan.
- Ensure that public health organizations have the capacity to carry out the core functions of assessment, policy development and quality assurance necessary to prevent disease and disability.
- Develop and fund a comprehensive array of prevention programs and services that inform, motivate and enable people to take action regarding their own health and their use of health care services.
- Put comprehensive systems in place to detect and respond appropriately to infectious disease events of importance to the public's health, be they single cases, outbreaks, or acts of terrorism.
- Implement information systems that will include specifications for reporting data needed by public health to monitor health status, evaluate performance of the health care sector, identify new and emerging issues, and redirect resources to problem areas.

### *Background:*

Unlike health care, which usually provides services to one person at a time, public health is primarily concerned with the health of the population as a whole, or of specific sub-sets of the population. Public health services are less visible and often more difficult to understand than medical services. The most common tools of public health are education, systems development, sanitation and regulation. Its approach is chiefly preventive and highly collaborative in nature.

### **Figure 7 Examples of Public Health Entities**

- Department of Health
- Department of Environmental Control
- Department of Labor and Industry
- Department of Banking, Insurance, Securities and Health Care Administration
- Department of Aging and Independent Living
- Agency of Transportation
- Public Safety/Law Enforcement
- Area Health Education Centers
- Vermont Program for Quality in Health Care
- Vermont Child Health Improvement Program
- Campaign to End Child Hunger

Most public health services in Vermont are provided by the Vermont Department of Health. It is important to note that other government agencies have key responsibility for promoting and protecting the health of the public, and that private organizations also have public health functions. The Area Health Education Centers of the University of Vermont, College of Medicine, provide an array of services including workforce development and community services. The Vermont Campaign to End Child Hunger works to ensure access to adequate healthy food. The Vermont Program for Quality in Health Care and the Vermont Child Health Improvement Program work to assure the availability of high quality health services.

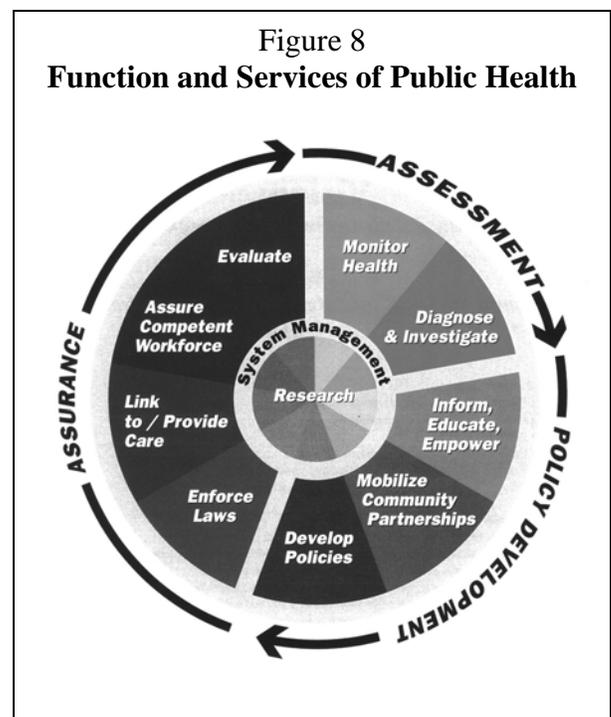
The greatest public health success in the 20<sup>th</sup> Century was the control of infectious disease through improved sanitation, food and water safety, immunization, antibiotics and other strategies. Significant strides were also made in reducing disability and deaths from injury with improvements in automobile and road design, consumer product safety, worksite safety, and the use of helmets and other safety devices.

The need for public health interventions to reduce the disability and death associated with chronic diseases was not widely recognized until the late 1960s, with the publication of the U.S. Surgeon General’s report on tobacco. Since then, the increased prevalence of chronic disease, identification of environmental carcinogens, studies showing the importance of physical activity to health, the increased prevalence of obesity and other factors have further reinforced the importance of the public health approach in chronic disease.

## Public Health Functions and Services

The mission of public health is accomplished in three broad functional areas, and 10 services as illustrated in Figure 8. The functional areas are shown outside the wheel and include:

- Assessment is the process of determining where and when public health threats occur. It includes monitoring indicators of health status, diagnosis of problems and dissemination of information about the health of the population.
- Policy development uses the assessment data to consider alternatives and set priorities for action. It includes informing, educating and empowering people, mobilizing community partnerships and development of policies and plans to address health issues.
- Assurance involves seeing that policies are carried out and includes enforcement of laws and regulations, linking people with high quality services, ensuring a competent workforce, and evaluation of the effectiveness, accessibility and quality of health services.



- Research is the sound science and strong evidence base that guides all public health services. Implementation of services relies on systems management techniques.

## Public Health as an Investment

It is estimated that 70 percent of premature mortality could be prevented by reducing risky behaviors and environmental threats.<sup>15</sup> The cost of many public health prevention services is far less than the cost of the treatment that would be needed:

- The cost of water fluoridation for an individual's entire lifetime (about \$38) is about the same as the cost of treating just one tooth with one cavity.
- Each dollar spent on helping a pregnant woman stop smoking saves about \$6 in intensive hospital costs and long-term care for low birth weight babies.
- Each year public health outreach and vaccines have prevented nearly 7 million cases of measles, mumps and rubella, saving \$14 in medical care costs for every dollar spent immunizing children.<sup>16</sup>

An effective public health system requires the collaborative effort of a complex network of people and organizations in the public and private sectors, as well as the alignment of policy and practice of governmental public health agencies. For governments to accomplish their goals, policy makers must provide the political and financial support for strong and effective government public health agencies.

Governments act in several areas to improve population health. These include policy making, financing, public health protection, collecting and disseminating information about health and health care, capacity building and direct management of services. The legislature is responsible for creating the policies and allocating resources needed for implementation. The executive branch, through the official public health agency and other departments, acts within the scope of legislative authority to implement and enforce those policies.

## Response to Infectious Disease Events

One of the major and long-standing roles of the public health system has been the detection of and response to infectious disease events. These events can be single cases of infectious diseases, some of which are highly communicable and can have very serious outcomes (e.g. measles). These can also be outbreaks of infectious diseases that affect large numbers of people, where prompt recognition of the cause can prevent additional illness. More recently, these events have included acts of bioterrorism, where mail was deliberately contaminated with the anthrax bacteria. Finally, newly identified diseases such as SARS, West Nile or Monkey Pox, often require new and innovative approaches to prevention and control.

To ensure there continue to be systems in place to respond to these infectious disease events, resources must be continually directed to the following activities:

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<sup>15</sup> State of Washington Department of Health *Public Health Improvement Partnership*. Page 19.

[Hhttp://www.doh.wa.gov/PHIP/default.htm](http://www.doh.wa.gov/PHIP/default.htm)H

<sup>16</sup> State of Washington. Page 4.

- Disease diagnosis: Health care providers need up-to-date information as well as high-quality and reliable tests to aide in their diagnoses of diseases.
- Disease surveillance: Health care providers and public health professionals need appropriately redundant systems in order to monitor the occurrence of infectious diseases and to be alerted to these in a timely manner.
- Prevention and control: The public health system needs to have knowledgeable and skilled personnel who are able to respond quickly and effectively to infectious disease events.

## **Collaboration with the Health Care and Communities**

Public health efforts have long depended on the health care establishment and health providers to implement key prevention services, most commonly related to infectious disease, whereby providers give immunizations and report significant infectious disease events to the Department of Health. The two often share responsibility for treatment services for highly infectious conditions such as tuberculosis and sexually transmitted disease. Since the 1960s, government has assured accessibility to health care services by purchasing care for high-need populations through the Medicare and Medicaid programs, community mental health agencies, alcohol and drug treatment programs, and other programs.

Likewise, public health has worked closely with community organizations to protect health and prevent disease. Community water fluoridation, immunization clinics, school health, regional partnerships and HIV prevention projects are examples of such community work. In Vermont, much community work has been done through Department of Health district offices, through other departments of the Agency of Human Services, and through contract agencies such as Planned Parenthood of Northern New England, home health agencies, the Area Offices on Aging and community mental health agencies. In addition to direct grants for service, the Health Department has provided training, grants and other support services to numerous local agencies.