INFRASTRUCTURE FOCUS AREA PROFILES

INTRODUCTION and MUTUAL INFLUENCE OF THE FOCUS AREAS

Introduction

The infrastructure focus areas represent the engine of Wisconsin's public health system and provide capacity to act upon the overarching and health focus areas. Without a strong set of interconnecting infrastructure focus areas, progress to protect the health of the public will be thwarted. The health, infrastructure and overarching focus areas are interdependent and synergistic.

Every focus area identified in *Healthiest Wisconsin 2020* has a Focus Area Profile. The three categories of focus areas include: Health Focus Areas, Infrastructure Focus Areas, and Overarching Focus Areas. The profiles are the products of the Focus Area Strategic Teams convened by the Wisconsin Department of Health Services from September 2009 to November 2009. These 23 Teams were composed of community and subject-matter experts. For each of the focus areas, a focus area profile was developed by the partners to provide a "jump start" for collective action. Each focus area profile contains the following elements:

- Definition (scope) of the focus area
- Why the focus area is important
- Data highlights
- Objectives for the decade including indicators and rationale for why the objectives were selected
- Potential evidence- or science-based actions to move the focus area objectives forward over the decade
- References

The profiles are designed to be acted upon by designated "champions" and used by "communities of practice" to move the objectives forward during the 2010 – 2020 decade. (Refer to Section 6 of the *Healthiest Wisconsin 2020* plan concerning the implementation of *Healthiest Wisconsin 2020*.) It is likely that a process will be established, as part of the Implementation Plan, to update and build upon the profiles over the decade and achieve the goals of (1) improving health across the life span, and (2) eliminating health disparities and achieving health equity.

Mutual Influence

A Necessity: Linking the health, infrastructure and overarching focus areas when planning, taking collective action, measuring progress, and evaluating results.

The health, infrastructure, and overarching focus areas are interdependent, synergistic and promote "whole systems thinking." The infrastructure focus areas describe the essential capacities that need to be in place to effectively act upon a health or overarching focus area and achieve results. For example, one cannot hope to improve access to high-quality health services or reduce the leading causes of injury without considering infrastructure supports for that focus area (e.g., data and information, plans, partners, a skilled diverse workforce, or the resources to do the job). In these ways, *Healthiest Wisconsin 2020* moves us away from isolated fragmented approaches and toward whole systems thinking.

Consider . . .

"None of us can expect to act on more than a tiny corner of the great complexity. But in our interrelated society, itself part of an uncompromising world, we have to **think** about the whole complexity in order to **act** relevantly on any part of it."

Harlan Cleveland
The Knowledge Executive
(Out of print)

Infrastructure Focus Areas

The nine Infrastructure Focus Areas and their corresponding objectives can be viewed as the essential underpinnings of how work gets done. For more information, refer to Section 4 of *Healthiest Wisconsin 2020*. Objectives were developed with proposed indicators for each of the following nine Infrastructure Focus Areas:

- Access to high-quality health services
- Collaborative partnerships for community health improvement
- Diverse, sufficient and competent workforce that promotes and protects health
- Emergency preparedness, response and recovery
- Equitable, adequate and stable public health funding
- Health literacy
- Public health capacity and quality
- Public health research and evaluation
- Systems to manage and share health information and knowledge

Health Focus Areas

The 12 Health Focus Areas address important health outcomes for the decade. This set of focus areas will be familiar to almost everyone, since they address real health issues in a direct way. However, it is also important to realize that work on the Health Focus Areas and their corresponding objectives rely on the public health system infrastructure and pillar objectives to be effective and sustainable. Objectives were developed with proposed indicators for each of the following 12 Health Focus Areas:

- Adequate, appropriate, and safe food and nutrition
- Alcohol and other drug use
- Chronic disease prevention and management
- Communicable disease prevention and control
- Environmental and occupational health
- Healthy growth and development
- Injury and violence
- Mental health
- Oral health
- Physical activity
- Reproductive and sexual health
- Tobacco use and exposure

While some of these focus areas and their objectives will speak more specifically to one community or constituency than others, any individual, organization and community should be able to identify at least some objectives that are highly relevant to their areas of need, interest or expertise. *Healthiest Wisconsin 2020* provides opportunities for organizations, agencies, communities, and systems to integrate *Healthiest Wisconsin 2020* objectives into their plans for health improvement.

Overarching Focus Areas

Healthiest Wisconsin 2020 has the following two Overarching Focus Areas:

- Social, economic, and educational factors that influence health
- Health disparities

These two focus areas connect the partners and the plan to the underlying forces that influence illness, injury, premature death and disability. These forces are known as the underlying determinants of health. (Refer to Figure 2 and the accompanying discussion found in Section 1 of *Healthiest Wisconsin 2020*.) As with the infrastructure profiles, partners need to consider the influence that education, income, and social connections/influence have on current and future health and health outcomes, and also the influence on health exerted by race, ethnicity, disability, gender orientation and sexual preferences.

Pillar Objectives

Ten pillar objectives have been identified in the *Healthiest Wisconsin 2020* plan. These objectives are called "pillars" because their achievement is important to sustainable support of every other objective in the plan. Some Pillar Objectives are derived from the plan's two Overarching Focus Areas (Health Disparities; and Social, Economic, and Educational Factors that Influence Health), and some represent common themes found in many of the health and infrastructure objectives. The Pillar Objectives are so crucial and, in some cases, so difficult to achieve, that all plan partners are needed to work on them.

Five of the 10 *Pillar Objectives* come from two focus areas that the Strategic Leadership Team determined were overarching to the entire plan: Health Disparities; and the Social, Economic and Educational Factors that Influence Health. These objectives are central to the plan's mission and vision, and affect every other objective in the plan. Five additional *Pillar Objectives* were derived from common themes found across many Infrastructure and Health Focus Area objectives. These identified high-impact opportunities that promise to propel the entire plan forward.

ACCESS TO HIGH-QUALITY HEALTH SERVICES

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Access to high-quality health services means universal access to affordable high-quality health services for all people in Wisconsin to promote optimal physical and mental health and to prevent illness, disease, injury, disability, and premature death.

High-quality health services include the full range of health care services, including medical, dental, mental health, and long term care. *Access to high-quality health services* means they are available to the people of Wisconsin when, where, and how services are needed. This includes equitable access to health promotion and disease prevention services across the life span that are coordinated, culturally competent, and linguistically appropriate.

Health services promote a patient-centered medical home where there is a regular source of primary care and care is coordinated across health, public health, and other care systems, including long-term care that integrates health and social care and fosters independence and resilience. To be effective in producing good health outcomes, health services must be integrated, equitable, patient-centered, safe, timely, and efficient to effectively meet the needs of diverse populations.

Importance of the Focus Area

To ensure the health and economic security of Wisconsin families, everyone in the state needs access to affordable and high-quality health services, regardless of health, employment, financial, or family status.

Wisconsin has a much lower rate of uninsured than most other states. Nationally, the percentage of people without health care coverage in 2008 was 15.4 percent (U.S. Census

Bureau). According to the Wisconsin Department of Health Services' 2008 Family Health Survey, 89 percent of Wisconsin residents had insurance for all 12 months prior to the survey interview, 5 percent had insurance for some of the past 12 months, and 6 percent had no insurance coverage at all during the past 12 months.

Wisconsin is a national leader in providing health care coverage to low-income children and adults through Medicaid, the Children's Health Insurance Program, and community health centers. The Wisconsin Department of Health Services recently implemented several important health care reform initiatives to significantly increase access to health care for low-income Wisconsin residents.

The BadgerCare Plus program, implemented in 2008, expanded coverage to all uninsured children and additional pregnant women, parents, and self-employed parents. In 2009, the BadgerCare Plus Core Plan was implemented for low-income, childless adults without health insurance. As of February 2010, more than 1,123,000 Wisconsin residents were enrolled in the Medicaid and BadgerCare Plus programs.

While the expansion of BadgerCare Plus is a significant improvement for low-income Wisconsin residents, it does not fully address the uninsured and underinsured problem. Data indicate that the rate and affordability of employer-subsidized insurance is declining (Kaiser Family Foundation, 2008). Furthermore, the percentage of workers enrolled in high-deductible or otherwise unaffordable health plans is increasing. People with insurance plans that have low levels of benefits or high cost-sharing face substantial financial and health risks, especially if they have a condition requiring ongoing and costly medical care (Kaiser Family Foundation, 2002).

As reported in a February 2005 *Health Affairs* article (Shoen, et al.), approximately two-thirds of underinsured adults and three-fourths of uninsured adults with a chronic health condition or poor health did not get needed medical services; nearly half skipped prescribed medications because of cost. In addition to medical problems, the underinsured also face financial problems from the medical care they receive. In 2007, with support from the Robert Wood Johnson Foundation, researchers at Harvard and Ohio Universities found that illness, injury, and medical expenses contributed to more than 60 percent of the bankruptcy cases studied (Himmelstein, et al., 2005).

Although having insurance coverage facilitates entry into the health care system, the availability of practitioners in the workforce and their capacity to provide culturally and linguistically competent care to a diverse population, including those persons with disabilities, also constitutes a significant health factor. A 2002 survey by the Center for Disability Issues and the Health Professions indicates only a minority of primary care physicians have had training in physical disabilities issues; a majority had at least some difficulty in examining patients with physical disabilities; and many felt uncomfortable in managing their care.

Evidence also indicates that access to a medical home has a significant impact on health. Information gathered through the Wisconsin Department of Health Services' 2007

Family Health Survey indicates 96 percent of Wisconsin household residents have a usual place of care, but slightly more than 2 percent reported a hospital emergency room or urgent care center as their usual place of care. People without insurance and a usual source of health care are four times as likely to delay or go without medical care, which can lead to more serious illnesses and hospitalizations for avoidable conditions (Kaiser Family Foundation, 2008).

As reported by the Commonwealth Fund (2006), having health insurance coverage and a medical home can reduce or even eliminate racial and ethnic disparities in access to care for adults. Providing access to a medical home where care is coordinated is critical to keeping children and youth with special health care needs and adults with disabilities healthy, independent, and productive. A medical home is defined as a model of delivering primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective care (American Academy of Pediatrics, 1992). The Joint Principles of the Patient-Centered Medical Home, adopted by the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association (2007) describes a medical home as "an approach to providing comprehensive primary care for children, youth, and adults."

Assuring access to affordable health services and a medical home with an adequate supply of well-prepared practitioners in all health care settings is a vital step in reducing disparities and keeping all residents healthy, independent and productive.

Wisconsin Data Highlights

- The Family Health Survey (2007) an estimated 96 percent of Wisconsin household residents were reported to have a usual place of care. This group includes slightly more than 2 percent reported to use a hospital emergency room or urgent care center as their usual place of care. About 221,000 or 4 percent of residents did not have a usual place of care (2008 Family Health Survey, unpublished data).

- According to the 2008 Wisconsin Family Health Survey, 89 percent of Wisconsin residents had insurance for all 12 months prior to the survey interview, 5 percent had insurance for some of the past 12 months, and 6 percent had no insurance coverage at all during the past 12 months (Department of Health Services [DHS], 2009).

- The proportion of people in 2008 without health insurance for the entire year was higher among Hispanic residents (22 percent) than among non-Hispanic Whites (5 percent) and non-Hispanic Blacks (9 percent) (DHS, 2009).

- In 2008, the proportion of people without health insurance was higher among poor residents (19 percent) than among near-poor residents (12 percent) and residents who were not poor (3 percent). ("Poor" means below the federal poverty guidelines; "near-poor" means income more than 100 percent but less than 200 percent of poverty guidelines; and "not poor" means income at 200 percent of poverty guidelines or

higher.) Eleven percent of children (ages 0-17) living in poor households were uninsured for part or all of the past year, compared to 4 percent of children in households that were not poor (DHS, 2009).

- The uninsured rate among lesbian, gay and bisexual respondents aged 18-64 was 27.3 percent, compared to 10.9 percent for heterosexual respondents (Wisconsin Behavioral Risk Factor Survey, 2008. Wisconsin Division of Public Health, 2010).

- Among people ages 18-65, the percentage uninsured was 20.5 percent among those with a high school diploma or less education, compared to 6.8 percent among those with education beyond high school (Chen, et al., 2009).

- In the age group 18-44, 81.6 percent of those with a disability have health care coverage, compared to 87.4 percent of those without a disability. Among those aged 45-64, 88.6 percent of those with a disability have health care coverage, compared to 91.7 percent of those without a disability (Centers for Disease Control and Prevention, *Disability and Health State Chartbook – 2006*).

- In 2006, the percent of adults in Wisconsin with a disability who have difficulties/delays in obtaining needed health care was 31 percent, compared to 20 percent of adults without a disability (Medical Expenditure Panel Survey, 2006).

- Insurance was reported as inadequate for 34.4 percent of Wisconsin children with special health care needs (State and Local Area Integrated Telephone Survey, 2005-2006).

- One in five Wisconsin families reported spending $1,000 or more each year for out-of-pocket medical expenses (State and Local Area Integrated Telephone Survey, 2005-2006).

- In 2007, an estimated 54.8 percent of children with special health care needs in Wisconsin had access to a medical home, compared to 65 percent of children without a special need (National Survey for Children's Health, 2007).

Objective 1

By 2020, assure all residents have affordable access to comprehensive, patient-centered health services that are safe, effective, affordable, timely, coordinated, and navigable.

Objective 1 Indicators

- Proportion of people with health insurance (National Health Interview Survey [NHIS], Wisconsin Family Health Survey [WFHS]).
- Proportion of people with a specific source of ongoing care (National Health Interview Survey, Wisconsin Family Health Survey).
- Number of National Committee for Quality Assurance (NCQA) - certified medical home practices in state.

- Proportion of counties with more than one full-time equivalent dentist providing Medicaid services per 4,000 low-income persons (Wisconsin Division of Public Health Primary Care Office). (Indicator to be developed.)
- Proportion of health plan members receiving care meeting National Committee for Quality Assurance (NCQA) or Healthcare Effectiveness Data and Information Set [HEDIS] standards. (Indicator to be developed.)

Objective 1 Rationale
Access to affordable health care coverage and a medical home for all people living in Wisconsin will make a substantial contribution to improving the quality of life and eliminating disparities in health care access and quality.

Objective 2

By 2020, assure that populations of differing races, ethnicities, sexual identities and orientations, gender identities and educational or economic status, and those with disabilities, have access to comprehensive, patient-centered health services that are safe, effective, affordable, timely, coordinated and navigable.

Objective 2 Indicators

- Proportion of people in each population group with health insurance (National Health Interview Survey, Wisconsin Family Health Survey). (Indicator to be developed.)
- Proportion of people in each population group with an ongoing source of care. (Indicator to be developed.)
- Proportion of adults with and without a disability who report difficulties or delays in obtaining needed health care (Medical Expenditure Panel Survey (MEPS)).
- Proportion of Wisconsin children who report inadequate health insurance (State and Local Integrated Telephone Survey (SLAITS)).

Objective 2 Rationale
Access to affordable health care coverage and a medical home for all people living in Wisconsin will make a substantial contribution to improving the quality of life and eliminating disparities in health care access and quality.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Implement comprehensive high-quality health coverage reform to provide universal coverage (Booske, et al., 2009) to include:
    - Federal health care reform
    - Employer and individual mandates
- Implement other programs and policies to improve access to high-quality care (Booske, et al., 2009), to include:
    - Mental health parity

- Telemedicine
- Medical homes
- Funding for safety net providers
- Electronic medical records to support coordination of health services.

References

American Academy of Family Physicians (2008). Retrieved on March 16, 2020 from http://www.aafp.org/online/en/home/policy/policies/p/patientcenteredmedhome.html

American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and American Osteopathic Association. Joint principles of the patient-centered medical home. 2007 Mar. Retrieved on March 4, 2010 from http://www.medicalhomeinfo.org/Joint%20Statement.pdf

American Academy of Pediatrics, Ad Hoc Task Force on Definition of the Medical Home. Pediatrics 1992 Nov;90(5):774

Booske, B.C., Kindig, D.A., Nelson, H., Remington, P.L. (2009). *What works? Policies and programs to improve Wisconsin's health.* University of Wisconsin Population Health Institute.

Chen, H.Y., Baumgardner, D.J., Bergstrom, J.P., Mori, N., Swain, G.R., & Cisler, R.A. (2009). Milwaukee Health Report 2009: Health Disparities in Milwaukee by Socioeconomic Status. Center for Urban Population Health: Milwaukee, WI.

Closing the Divide: How Medical Homes Promote Equity in Health Care: Results from the Commonwealth Fund 2006 Health Care Quality Survey. Retrieved on March 16, 2010 from http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2007/Jun/Closing-the-Divide--How-Medical-Homes-Promote-Equity-in-Health-Care--Results-From-The-Commonwealth-F.aspx?view=print

DeNavas, W., Carmen, B.D., Proctor, and Smith, J.C. U.S. Census Bureau, Current Population Reports, P60-236, *Income, Poverty, and Health Insurance Coverage in the United States: 2008*, U.S. Government Printing Office, Washington, DC, 2009.

Disability and Health State Chartbook – 2006, Profiles of Health for Adults With Disabilities. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved on March 16, 2010 from http://www.cdc.gov/ncbddd/dh/chartbook/default.htm

Himmelstein, D., Warren, E., Thorne, D., Woolhandler, S. "Illness and Injury as Contributors to Bankruptcy," *Health Affairs* (2005): w5-63:w5-73. Retrieved on March 16, 2010 from http://www.rwjf.org/reports/grr/042425.htm

Kaiser Commission on Medicaid and the Uninsured. The Uninsured and the Difference Health Insurance Makes. Kaiser Family Foundation. Publication #1420-10 September 2008. Retrieved March 16, 2010 from www.kff.org

Kaiser Commission on Medicaid and the Uninsured. Underinsured in America: Is Health Coverage Adequate? Kaiser Family Foundation. Publication #4060. July 2002. Retrieved on March 16, 2010 from http://www.kff.org/uninsured/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=14136

McNeal, M.A.L., Carrothers, L., Premo, B. Providing Primary Health Care for People with Physical Disabilities: A Survey of California Physicians, 2002. Harris Family Center for Disability and Health Policies.

Reed, M., Fung, V., Price, M., Brand, R., Benedetti, N., Derose, S.F., Newhouse, J.P, and Hsu, J. "High-Deductible Health Insurance Plans: Efforts to Sharpen a Blunt Instrument," *Health Affairs*, July/Aug. 2009, 28(4):1145–53. Accessed March 16, 2010

Schoen, C. "Insured But Not Protected," *Health Affairs* (2005): hlthaff.w5.289v1. Retrieved on March 16, 2010 from http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.289v1

U.S. Department of Health and Human Services, Surgeon General's Call To Action To Improve the Health and Wellness of Persons with Disabilities. U.S. Department of Health and Human Services, Office of the Surgeon General, 2005. Retrieved on March 16, 2010 from http://www.surgeongeneral.gov/library/disabilities/calltoaction/calltoaction.pdf

Wisconsin Behavioral Risk Factor Survey, 2008. Wisconsin Division of Public Health, 2010.

COLLABORATIVE PARTNERSHIPS FOR COMMUNITY HEALTH IMPROVEMENT

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Collaborative partnerships for community health improvement means the full engagement of the outer ring of the *Healthiest Wisconsin 2020* framework at the local, regional, and statewide levels to collaboratively address the 23 focus areas to achieve the goals of improving health across the life span and achieving health equity and eliminating health disparities for everyone in Wisconsin.

- Partnerships provide capacity for healthy communities.
- Partnerships are established on formal and informal levels and are essential to address community health improvement planning and action that affect population health outcomes and achieve the shared vision of everyone living better, longer.
- Partnerships use evidence-based interventions to build and support healthy communities.
- Partnerships collaboratively identify, implement, and evaluate strategies to address infrastructure and health priorities at the state and local levels.

Importance of the Focus Area

A system of partnerships goes to the heart of the definition of public health in Wisconsin. *Healthiest Wisconsin 2020* calls for sustainable partnerships, not only to assure engagement of new partners and communities, but to move the public health system to the next level where all partners demonstrate shared leadership, shared resources, and shared accountability to improve health for all and eliminate health disparities. The public should expect nothing less.

Wisconsin Statute 250.03(L) lists 10 essential services to be carried out by the public health system (originally published as part of the *Public Health in America Statement*, 1994). Those who help carry out one or more of the 10 essential public health services

are part of Wisconsin's public health system and important partners in *Healthiest Wisconsin 2020*. The essential public health services include:

1. Monitor the health status of populations to identify and solve community health problems.
2. Investigate and diagnose community health problems and health hazards.
3. Inform and educate individuals about health issues.
4. Mobilize public and private sector collaboration and action to identify and solve health problems.
5. Develop policies, plans, and programs that support individual and community health efforts.
6. Enforce statutes and rules that protect health and ensure safety.
7. Link individuals to needed personal health services.
8. Assure a competent public health workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Provide research to develop insights into and innovative solutions for health problems.

Partnerships between government and the public, private, nonprofit, civic, and voluntary sectors have grown significantly since the publication of *Healthiest Wisconsin 2010* and have become a basic business process. The types of partnerships are almost as varied as they are numerous. All Wisconsin health departments have helped to develop community advisory teams to guide the development of community health improvement plans. Such plans provide a population-based approach to support the public health mission of aligning policies and systems to assure conditions for healthy, safe, and resilient communities, families, and individuals.

Success in improving the health of the community requires that members of community partnerships embrace their role as leaders and their role in using science and evidence to achieve the mission of public health. Partnerships are crucial to solving problems, preserving community assets, and building social capital in communities. Building and sustaining community partnerships that reach out to and include community-based organizations serving diverse populations will assure that partnerships are representative of the diversity of the community. Diversity and representativeness are important factors for success.

Despite good intentions, diverse partners may not be at the table simply because they were not invited or because the community-based organization lacks staff and resources. Partnerships that are not representative of the community can create a power differential so that majority partnerships can, intentionally or unintentionally, make decisions to "fix problems" for minority partners and populations. This power differential exists because there are trust issues, and cultural (language, ethnicity, social and economic) insensitivity. Until this can be straightforwardly addressed, partnerships focused on health equity will not be successful.

Partnerships improve health through collective action and can take on various forms that range from networking, to coordinating, to cooperating, to collaborating. To be effective, partnerships must overcome the potential barriers to effectiveness posed by time, trust, and turf (Himmelman, 2002).

Despite the exponential growth in public health partnerships, resources are not available to systematically organize and categorize these partnerships, track progress, or evaluate the benefits and outcomes of partnership efforts in Wisconsin communities. Partnerships do not routinely document and claim "credit" for successes that lead to improved health. Taking credit for community improvement progress is important so the partners can demonstrate why their organizations should continue to support and contribute to partnership work in their community.

Evaluation is a challenge. It is difficult to evaluate the specific effect that a partnership has on current and emerging community issues when other activities in the community may also influence the issue the partnership is working on.

Successful partnerships require

- Engaging individuals and organizations affected by, interested in, and/or having the capacity to affect the issue,
- Nurturing strong relationships between diverse individuals from across the community,
- Fostering mutual respect, trust and understanding, and
- Demonstrating balanced power among all members.

The *Healthiest Wisconsin 2020* Focus Area Strategic Team on partnerships identified several ways to promote partnerships to improve health outcomes that include:

- Creating a toolbox that will include resources to develop a model partnership,
- Funding partnerships so that all interested parties can fully participate in the partnership,
- Researching the factors that contribute to a successful partnership, and
- Developing and formally supporting partnerships that management endorses.

Wisconsin Data Highlights

- In a 2003 study of partnerships reported by Wisconsin local health departments, approximately two-thirds (66 percent) had been in existence for three or more years. Most partnerships received little to no financial contributions. Local health departments supported partnerships primarily through in-kind staff contributions (78 percent) (Zahner, 2005b).

- The following characteristics were found to be statistically significant in predicting the implementation of partnerships plans: variation in partners; existence of a budget; more partners contributing financially; and time the partnership had existed (Zahner, 2005a).

Objective 1

By 2020, increase the use of effective strategies to promote partnerships to improve health outcomes through Web-based resources and a pool of trained experts.

Objective 1 Indicators

- Creation of a partnership tools website; frequency of use; user satisfaction. (Indicator to be developed.)
- Number of people completing trainings in health partnership development. (Indicator to be developed.)
- Wisconsin Department of Health Services meets Public Health Accreditation Board Standard 4.1.3S.
- Measured knowledge and implementation of partnership best practices. (Indicator to be developed.)

Objective 1 Rationale

Despite the exponential growth in public health partnerships, adequate resources have not been allocated to systematically organize, categorize the type and array, track progress, or evaluate the benefits and outcomes of partnership efforts in Wisconsin communities. Partnerships are crucial to solving problems, preserving community assets, and building social capital in communities.

Objective 2

By 2020, increase the proportion of public health partnerships that demonstrate balanced power, trust, respect, and understanding among affected individuals, interested individuals, and those with capacity to affect the issue.

Objective 2 Indicators

- Proportion of health partnerships that include members affected by the partnership's focus issues. (Indicator to be developed.)
- Proportion of partnerships' governance members affected by the health issue. (Indicator to be developed.)
- Proportion of affected members indicating satisfaction with shared power, respect and understanding of the partnership. (Indicator to be developed.)

Objective 2 Rationale

Building and sustaining community partnerships that reach out to and include community-based organizations serving diverse populations will assure the partnership is representative of the diversity of the community. Diversity and representativeness are important factors for the success and credibility of partnerships. Despite good intentions, diverse partners may not be at the table simply because they were not invited or because the invited organization declines participation because lack of staff and resources.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Create a community toolbox, similar to the Community Toolbox created by the University of Kansas. This is a global resource for free information on essential skills for building healthy communities. The toolbox offers two types of support for using promising approaches for promoting community health and development:
    - Support for implementing 'best practices,' or evidence-based mechanisms for promoting community change and improvement.
    - Links to databases of 'best practices,' or evidence-based approaches to address specific problems or goals (University of Kansas, Community Toolbox).

- Create a partner tool box that focuses on measuring the process of collaboration and connectivity, particularly the social infrastructure of interactions between involved members of a public health collaborative. By using the tool, partnerships can demonstrate to stakeholders, community members, and funders how their collaborative activity has changed or improved over time, including how community organizations participated (Varda, et al., 2008).

References

Booske, B.C., Kindig, D.A., Nelson, H., Remington, P.L. (2009). *What works? Policies and programs to improve Wisconsin's health.* University of Wisconsin Population Health Institute.

Himmelman A. *Communities Collaboration for Change (revised January 2002) Definitions, Decision-making models, Roles, and Collaboration Process Guide.* Retrieved on March 1, 2010 from http://depts.washington.edu/ccph/pdf_files/4achange.pdf

Levan L., Renshaw, P. The Relevance of Sociocultural Theory to Culturally Diverse Partnerships and Communities. *Journal of Child and Family Studies, Vol. 10, No. 1, 2001, pp. 9–21*

Public Health Functions Project. 1994. *Public Health in America Statement.* A joint effort of U.S. Public Health Service agencies and national public health organizations.

Roussos, Stergios Tsai, and Fawcett, Stephen. *A Review of Collaborative Partnerships as a Strategy for Improving Community Health.* Annu. Rev. Public Health. 2000. 21:369–402.

Varda et al. PARTNER (Program to Analyze, Record, and Track Networks to Enhance Relationships) (2008); from: Ix, Megan. *Measuring Partnerships in Public Health.*

Changes in Health Care Financing & Organization (HCFO)Vol. XII , No.1 February 2009

Wisconsin Statute 250.07. Section 250.03(1)(L)4).

Zahner, S.J., Public Health Reports / January–February 2005a / Volume 120 p. 76 Local Public Health System Partnerships.

Zahner, S.J., Kaiser, B., and Kapelke-Dale, J. Local Partnerships for Community Assessment and Planning. *J Public Health Management Practice.* 2005b,11 (5), 460-464 University of Kansas, Community Toolbox). Retrieved on March 1, 2010 from http://ctb.ku.edu/en/Default.htm

DIVERSE, SUFFICIENT, COMPETENT WORKFORCE THAT PROMOTES AND PROTECTS HEALTH

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

The definition of *public health workforce* includes all those who provide one or more of the 10 essential public health services, regardless of the nature of the employing agency. Wisconsin Statute 250.03(L) lists 10 essential services to be carried out by the public health system (originally published as part of the *Public Health in America Statement*, 1994). Those who help carry out one or more of the 10 essential public health services are part of Wisconsin's public health system and important partners in *Healthiest Wisconsin 2020*. The essential public health services include:

1. Monitor health status to identify and solve community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

This definition recognizes that a wide range of professional disciplines, in various employment settings (governmental and non-governmental), are needed to sustain a public health system for maximum societal benefit.

Traditionally, the public health workforce was thought to comprise governmental public health employees working for state or local health departments. This workforce is broader than many people may think. It includes job titles such as physician, nurse, dentist, dental hygienist, epidemiologist, sanitarian, food inspector, laboratory scientist, outreach worker, child care provider, communications specialist, educator, nutritionist, translator, quality assurance manager, occupational health inspector, environmental engineer, water hydrologist, administrator, support staff, information technologist, police officer, helpline provider, researcher, grants administrator, county board member, emergency responder, ambulance driver, city planner, legislator, teacher, and many others.

Importance of the Focus Area

The role of public health and the public health workforce in Wisconsin and throughout the nation has expanded in both scope and complexity. Recent events, including bioterrorism (e.g., the anthrax scares following September 11, 2001); natural disasters (e.g., Hurricane Katrina and the 2009 Wisconsin floods); and emerging infectious diseases and outbreaks (e.g., HIV/AIDS and the H1N1 influenza pandemic) have drawn attention to the importance of the public health workforce and its link to national security, and individual and community health (Draper, 2008).

However, the public health workforce is engaged in far more than emergency preparedness, response, and recovery activities. Through partnerships between government, public, private, civic, and nonprofit sectors, the public health workforce focuses on preventing disease, and promoting and protecting the health of all individuals and communities.

Investment in the public health system and the workforce that carries out its work is an investment that saves lives and money. For example, 80,000 young children live in Wisconsin homes with lead-paint hazards. An investment in lead-free windows in these homes would save and estimated $40,000-$50,000 per child in health care costs due to lead-related illnesses, for a combined savings of over $3 billion (Wisconsin Department of Health Services, 2008).

Despite the societal benefits of a workforce that is diverse in its demographic make-up, sufficient in number, and well-trained to protect health, the overall investment has not been sufficient or stable. Wisconsin has been relatively successful in reassigning its public health workforce during times of crisis (emergency events, such as responding to H1N1 pandemic influenza). However, this is not sustainable over a long period of time because it leaves workforce shortages and inadequate staff to carry out all of the programs and services needed on a day-to-day basis to improve and protect the public's health. This is true not only for government agencies, but also for community-serving organizations. Moreover, insufficient workforce capacity and resources compromise attention to diversity, competency, and systematic approaches to addressing current and emerging threats to health (Thacker, 2009).

In 2009, the Association of State and Territorial Health Officials issued the following warning for the approaching decade: ". . . many experts fear that without stable funding and significant investment in programs to attract professionals to governmental public health, an overburdened public health workforce will not be able to maintain and improve health outcomes or adequately handle a scenario involving multiple simultaneous health threats. An example of such an event could be a more virulent H1N1 outbreak coupled with any routine event such as a natural disaster or community outbreak."

Wisconsin's workforce needs to keep pace with the expected increases and changes in the population. "Wisconsin's population is projected to grow by 24.1 percent from 2000 to 2035, an average rate of 3.1 percent in each of the five-year periods. This predicted growth rate is lower than that of the 1990s and early 2000s but markedly faster than that of the 1980s. This projected growth in the state's population is noteworthy because it must be viewed in the context of an aging population as the "Baby Boomers," born between the 1945-1964 period, join the ranks of the elderly" (Wisconsin Department of Administration, 2008, page 3).

Unfortunately, as the needs for a sufficient, diverse, and competent workforce grow for both Wisconsin and the nation, the workforce is shrinking; this is due, in part, to large-scale retirement of the existing public health system workforce. The expected population increases and demographic shift pose tremendous public health workforce planning challenges. To illustrate, in 2007 over one-third of the Wisconsin Division of Public Health staff was eligible to retire within one year, 46 percent by 2009 and more than half (54 percent) by 2011.

According to the Wisconsin Department of Health Services Primary Care Program, Wisconsin continues to have many rural and urban communities with shortages of primary care, dental care, and mental health providers, making it more likely that people will postpone seeking care, need to travel greater distances to get care, or have long waiting times before medical appointments (Wisconsin Primary Care Programs, General Information, 2010).

Additionally, rural minority populations and people with low income and low educational attainment will face increasing problems in accessing high-quality health services; disparities in health can be expected to grow without a sufficient workforce. Strong evidence suggests that cultural competence training of the workforce will help improve health care access. There is also sufficient evidence to support expanding efforts to recruit health care professionals from minority groups (Booske, 2009).

At this time there are insufficient data to describe the entire Wisconsin government and non-government public health workforce engaged in carrying out the 10 essential services. Without data, workforce projections cannot be made and planning at all levels of the public health system will be hampered. Investments in public health workforce education, employment opportunities, and compensation are required to recruit and retain public health workers. A strong Wisconsin public health workforce contributes to the

health and economic well-being of our state. Workforce policy is both economic policy and public health policy.

Wisconsin Data Highlights

- In 2007, 34 percent of the Division of Public Health staff was eligible to retire within one year. This was expected to increase to 54 percent by 2011 (Wisconsin Public Health Workforce Report, 2008).

- In 2005, the national average staffing ratio for local health department Full-Time Equivalents (FTEs) was 9.3 staff per 10,000 population for small-town and rural health departments and 5.7 staff per 10,000 population for all other local health departments (National Association of City and County Health Officials Workforce Report, 2005).

- In 2006, the Wisconsin average staffing ratio for local health department FTEs was 3.5 staff per 10,000 population in rural counties, and 3.1 staff per 10,000 population in metropolitan counties (Public Health Workforce Report, 2008).

- In 2005, 67 percent of Wisconsin local health officers were age 50 and older (Wisconsin Public Health Workforce Report, 2008).

- In 2008, there were 32 Emergency Medical Services providers per 10,000 people in Wisconsin (Wisconsin Public Health Workforce Report, 2008).

- As of December 31, 2007, the Wisconsin Emergency Assistance Volunteer Registry had 1,970 unduplicated volunteers registered on the system.

- As of 2007, Medical Reserve Corps units in Wisconsin had 339 recorded volunteers.

- Between 2004 and 2014, Wisconsin health care jobs in the public sector (excluding state and local education and hospitals) are projected to increase by 9.2 percent, or 2,120 positions (Wisconsin Public Health Workforce Report, 2008).

- By 2010, an estimated 39 percent of the public-sector health care workforce in Wisconsin will be eligible to retire (Wisconsin Public Health Workforce Report, 2008).

- In 2009 there were 118 primary care, 76 dental, and 108 mental health professional shortage areas in Wisconsin (Wisconsin Department of Health Services, Primary Care Programs).

- Wisconsin has 118 primary care Health Professional Shortage Areas (HPSAs) encompassing 19 percent of the state's population and requiring 268 additional practitioners to meet the need for care; 76 dental HPSAs encompassing 36 percent of the state's low-income population and requiring 134 additional practitioners to meet

the need for care for low-income populations; and 109 mental health HPSAs encompassing 34 percent of the state's population and requiring 143 additional practitioners to meet the need for care (Health Resources Services Administration).

- In 2007, 69 of 72 counties had serious shortages of dentists who provided general dental care to low-income populations. These counties had a population-to-dentist ratio higher than the federal threshold for designated dental shortage areas (4,000 low-income population to 1.0 dentist Full-Time Equivalent) (Wisconsin Department of Health Services, Primary Care Programs).

Objective 1

By 2020, assure a sufficient and diverse health workforce competent to practice in current and evolving delivery systems to improve and protect the health and well-being of all people and populations in Wisconsin.

Objective 1 Indicators

- Percent of the adult population with a usual source of care (Behavioral Risk Factor Surveillance System).
- Provider-to-population ratios for mental health, dental and primary care. (Indicators to be developed.)
- Local health department staff-to-population ratios (Local Health Department Survey).

Objective 1 Rationale

This objective advances the development of a sufficient workforce, competent to practice in current and evolving delivery systems. Responses to Behavioral Risk Factor Surveillance Systems provide an indication of access to regular sources of coordinated primary medical, dental, and mental health care services. Maintaining an adequate local health department full-time equivalent staff to population ratio is required to carry out the core functions and essential public health services to protect and promote health. Persistent patterns of vacancies in local health department staffing patterns may indicate difficulty in carrying out the core functions and essential services. A high ratio of population to primary health care, mental health care, or dental health care providers indicates the community has provider shortages.

Objective 2

By 2020, establish a sustainable system to collect and analyze public health system workforce data including data on sufficiency, competency, and diversity reflecting Wisconsin's communities.

Objective 2 Indicator

Periodic inventory of data sets that measure public health system workforce sufficiency, competency and diversity. (Indicator to be developed.)

Objective 2 Rationale
An inventory of health workforce data and periodic reports, with uniform demographic information, will assist systems in scientifically based workforce planning and decision-making (e.g., educational pipelines, workforce policy and practice alignment, and employment practices) to support a diverse, sufficient and competent workforce that protects and promotes health.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Recruit and retain sufficient health care workforce.
  - Collect health workforce data about paid and volunteer workers, as recommended by multiple credible groups to improve health care access (Booske, 2009).
  - Develop public-private workforce partnerships as recommended by multiple groups as one way to assure an adequate competent workforce and improve health care access (Booske, 2009).

- Redefine scope of practice within and across professions.
  - Expand the scope of practice for various mid-level practitioners (e.g., dental hygienists, pediatric and psychiatric nurse practitioners) as recommended by multiple groups to improve health care access and increase workforce capacity (Booske, 2009).
  - Expand the use of community health workers as recommended by multiple groups to improve health care access (Booske, 2009).

- Increase cultural competency of providers (Booske, 2009).
  - Provide cultural competence training of the workforce to improve health care access (Booske, 2009).
  - Expand efforts to recruit health care professionals from minority groups.
  - Implement strategies in health care setting to recruit, retain, and promote at all levels of the organization a diverse staff and leadership that are representative of the demographic characteristics of the service area (U.S. Department of Health and Human Services, 2001).
  - Ensure that staff in health care settings, at all levels and across all disciplines, receive ongoing education and training in culturally and linguistically appropriate service delivery (U.S. Department of Health and Human Services, 2001).
  - Maintain in health care settings a current demographic, cultural, and epidemiological profile of the community as well as a needs assessment to accurately plan for and implement services that respond to the cultural and linguistic characteristics of the service area (U.S. Department of Health and Human Services, 2001).

References

Anderson, Laurie M., Scrimshaw, Susan C.P., Fullilove, Mindy T., Fielding, Jonathon E., Normand, J., and the Task Force on Community Preventive Services, *Culturally*

Competent Health Care Systems: A Systematic Review, 2003. Am J Prev Med 2003;24(3S).

Association of State and Territorial Health Officials. Public Health Workforce Position Statement, 2009. Retrieved February 26, 2010 from http://www.astho.org/Advocacy/Policy-and-Position-Statements/Workforce-Development/

Booske, B.C., Kindig, D.A., Nelson, H., Remington, P.L. (2009). *What works? Policies and programs to improve Wisconsin's health.* University of Wisconsin Population Health Institute.

Core Public Health Functions Steering Committee, 1994, as cited in the Centers for Disease Control and Prevention. Accessed March 23, 2010 from http://www.cdc.gov/od/ocphp/nphpsp/essentialphservices.htm

Draper, Debra A., Hurley, Robert E., Lauer, Johanna, *Public Health Workforce Shortages Imperil Nation's Health*, Center for Studying Health System Change, Research Brief No. 4, April 16, 2008, Retrieved on February 26, 2009

Medical College of Wisconsin, Inc., Wisconsin Public Health Association, Wisconsin Division of Public Health, Wisconsin Association of Local Health Departments and Boards, Wisconsin State Health Education Center System. (2008). *Stepping Up to the Challenge: Wisconsin's Public Health Workforce Call to Action*.

Popovic, Tanya, *Workforce Science: A Critical Component to Ensuring Future of Health*, 2009. Journal of Public Health Management and Practice, 2009, November (Suppl), S3–S4.

Public Health Functions Project. 1994. *Public Health in America Statement*. A joint effort of U.S. Public Health Service agencies and national public health organizations.

Thacker, Stephen B. *Guide for Applied Public Health Workforce Research: An Evidence-Based Approach to Workforce Development*, 2009, Journal of Public Health Management and Practice: November 2009 - Volume 15 - Issue 6 - p S109-S112 Retrieved February 2010 from http://journals.lww.com/jphmp/Fulltext/2009/11001/Guide_for_Applied_Public_Health_Workforce.23.aspx

U.S. Department of Health and Human Services, Office of Minority Health. *National standards for culturally and linguistically appropriate services in health care*: *Final report*. 2001. Retrieved February 26, 2010 from www.omhrc.gov/clas/

Perlino, Courtney M. APHA *Issue Brief: The Public Health Workforce Shortage: Left Unchecked, Will We Be Protected*? 2005. American Public Health Association.

Retrieved February 27, 2010 from http://www.apha.org/NR/rdonlyres/8B9EBDF5-8BE8-482D-A779-7F637456A7C3/0/workforcebrief.pdf

Wisconsin Department of Health Services, Division of Public Health, Bureau of Environmental and Occupational Health. 2008. *The Legacy of Lead: The Report on Childhood Lead Poisoning in Wisconsin 2008* (PPH 45109)
Retrieved February 27, 2010 from
http://dhs.wisconsin.gov/lead/LegacyofLead/LegacyofLead45109.pdf

Holve, E., Papa, K., Arnold, S., and Ix, M., A Needs Assessment for Data and Methods in Public Health Systems Research. Academy Health, 2010.
Retrieved February 26, 2010 from
http://www.academyhealth.org/Publications/BriefList.cfm?navItemNumber=534

Wisconsin Department of Health Services, Division of Public Health, Bureau of Health Information and Policy. *Wisconsin Public Health Workforce Report* (P-45719). August 2008.

Wisconsin Department of Health Services, Wisconsin Primary Care Programs, General Information.

Wisconsin Department of Health Services, Primary Care Program, Population to Provider Shortage Designations. Retrieved March 15, 2010 from
http://dhs.wisconsin.gov/health/PrimaryCare/ShortageDesignation.htm

Health Resources and Services Administration, U.S. Department of Health and Human Services. *Geospatial Data Warehouse (HGDW) Quick Access Maps, Health Professional Shortage Areas*, Retrieved on March 3, 2010 from
http://datawarehouse.hrsa.gov/quickaccessmaps.aspx

U.S. Department of Health and Human Services, U.S. Public Health Service. *The Public Health Workforce: An agenda for the 21st century. A Report of the Public Health Functions Project*. 1997. Washington (DC): U.S. Government Printing Office.

U.S. Department of Health and Human Services, 2000. The Key Ingredient of the National Prevention Agenda: Workforce Development: A Companion Document, Washington, D.C. Retrieved from ftp://ftp.hrsa.gov/bhpr/nationalcenter/hp2010.pdf

Wisconsin Department of Administration, Division of Intergovernmental Relations, Demographic Services Center, 2008. *Wisconsin Population 2035: A Report on Projected State and County Populations and Households for the Period 2000-2035 and Municipal Populations, 2000-2030*.
Retrieved March 15, 2010 from
http://www.doa.state.wi.us/docview.asp?locid=9&docid=2108

EMERGENCY PREPAREDNESS, RESPONSE, AND RECOVERY

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Emergency preparedness, response and recovery means the provision of funding and staff resources to support and assist local public health departments, tribes, other public health and health care partners and state agencies with planning, training, and exercising in order to effectively respond to public health emergencies and assure readiness. Effective emergency response also includes addressing the variety of special-needs populations who include, but are not limited to, people with disabilities such as deafness, blindness, or mobility impairments; frail elders; limited or non-English speaking people; and people with low literacy skills.

Importance of the Focus Area

Life in Wisconsin includes coping with weather-related emergencies such as tornadoes, flooding, extreme temperatures, or heavy snowfall; health-related emergencies such as the recent H1N1 influenza outbreak; and the ever-present threat of bioterrorism. Planning for such emergencies must be led by federal, state, and local governmental agencies in partnership with other public, private, nonprofit, and civic sectors. While many emergencies are unpredictable, steps can be taken to align policies and systems designed to protect the health and safety of individuals, families, and communities throughout Wisconsin.

Emergency preparedness covers many areas, from planning for response to natural and man-made events, to planning for disease outbreaks, such as pandemic influenza. Planning requires careful consideration of external factors and the needs of special population groups. In addition, it is important to carry out various levels of drills and exercises to help communities prepare for, and respond to, a host of emergencies. Web-based systems have been developed and are used for volunteer management, emergency

communications, and training of the emergency preparedness, response, and recovery workforce.

Public health and hospital preparedness systems have made Wisconsin more prepared than it has ever been before. Public health and hospital preparedness programs support and enhance the capacity of the state, local public health departments and tribes, and the health care system to prepare for public health threats and emergencies through planning, exercising, training, and responding. While many planners and responders dedicate their efforts to better prepare for emergencies, preparedness needs to be a joint effort.

Since 2001, preparedness has matured and expanded from predominantly a government function to increased emphasis on other public and private sector partners. Future efforts in this area must include a broader range of partners and reach additional sectors of the population, including at-risk populations. As this expansion occurs, adequate dedicated and sustainable funding must be established at the state level to assure Wisconsin's success in protecting the health and safety of the public over the next decade. Through collaboration of government-based efforts and individual responsibility, we can all be better prepared for unexpected events.

While many of the *Healthiest Wisconsin 2020* goals and capabilities are directly related to communicable disease prevention and control, emergency preparedness also includes protection of the basic human hierarchy of needs. The more sustainable a community can make its water, air, food and shelter, the more time and resources the community will have to focus on higher-level needs such as social relationships, economic issues, and education. To be most effective, emergency preparedness must build into other planning and programs at the community and individual levels.

Wisconsin Data Highlights

- Twenty-seven states, including Wisconsin, cut funding for public health from fiscal year 2008 to fiscal year 2009 (Trust for America's Health, 2009).

- The Public Health and Hospital Preparedness programs at the Wisconsin Division of Public Health are funded by federal grants from the Centers for Disease Control and Prevention and the Assistant Secretary for Preparedness and Response, and receive no direct state funding.

- Federal funding for public health emergency preparedness and hospital preparedness has declined 27 percent since fiscal year 2005 when adjusted for inflation. While additional funding has been provided to respond to emergencies, this is less effective than ongoing support for preparedness (Trust for America's Health, 2009).

- Despite a federal mandate, the U.S. continues to lack an integrated, national approach to biosurveillance that is capable of responding to catastrophic health threats or to more familiar problems such as the contamination of food supplies (Trust for America's Health, 2009).

- Wisconsin has successfully established capacity to coordinate efforts in preparedness planning, assessing, training, exercising, communicating, and responding to multi-jurisdictional events (Wisconsin Department of Health Services, 2009).

- Disaster preparedness and emergency response systems are typically designed for people without disabilities, for whom escape or rescue involves walking, running, driving, seeing, hearing, and quickly responding to instructions, alerts, and evacuation announcements (Frieden, 2005).

- People with disabilities frequently encounter barriers in shelters and recovery centers, and in other facilities used in connection with disaster operations such as first-aid stations, mass feeding areas, portable payphone stations, portable toilets, and temporary housing (Frieden, 2005).

- Access to emergency public warnings, as well as preparedness and mitigation information and materials, does not adequately include people who cannot depend on sight and hearing to receive their information (Frieden, 2005).

Objective 1

By 2020, strengthen emergency preparedness, response, and recovery through integration into existing organizations and programs; and collaboration and coordination between partners.

Objective 1 Indicators

- Periodic state and federal reports that evaluate state progress, including the *Preparedness Legislative Report on Wisconsin Homeland Security*; State of Wisconsin Preparedness Report; *Public Health Preparedness*: *Strengthening CDC's Emergency Response – A CDC Report on Terrorism Preparedness and Emergency Response (TPER) Funded Activities.*
- Wisconsin's state ranking in Trust for America's Health annual *Ready or Not* report.

Objective 1 Rationale

Emergency preparedness must be sufficiently funded and integrated across many sectors in the outer ring of the *Healthiest Wisconsin 2020* framework. These activities must not be addressed in a silo in order to save lives and prevent economic and social disruption.

Objective 2

By 2020, strengthen emergency preparedness, response, and recovery through individual and community empowerment, outreach and engagement to all sectors, particularly at-risk populations.

Objective 2 Indicator
Proportion of households by population group with emergency and communication plans (Wisconsin Emergency Management Survey).

Objective 2 Rationale
Emergency preparedness is a social responsibility. It is important for individuals and families to be knowledgeable and ready in order to create a culture of preparedness. Communities must be given the necessary tools, trainings, and support in order to achieve an adequate readiness level to protect health and safety. Preparedness is personal, and the more ready families and individuals are, the better their community will be able to respond and recover.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Conduct field research studies to gather systematically collected data to help planners avoid common disaster management pitfalls and improve disaster response planning and recovery (Auf der Heide, 2006).

- Expand the use of Community Emergency Response Teams in Wisconsin. The Community Emergency Response Team (CERT) program helps train people to be better prepared to respond to emergency situations in their communities. When emergencies happen, CERT members can give critical support to first responders, provide immediate assistance to victims, and organize spontaneous volunteers at a disaster site. CERT members can also help with non-emergency projects that help improve the safety of the community.

- Assure that Wisconsin families are prepared to respond efficiently to emergency situations.

- Increase public awareness of individual responsibility in emergency preparedness, response, and recovery. When disaster strikes, immediate help may not be available.
    - Households should have an emergency kit with enough supplies to last three days following a natural disaster, health or man-made emergency.
    - Families should have an emergency plan that has been discussed with family, friends, and neighbors.
    - Households should have at least one battery-operated radio in case there is a power failure.
    - Families should make certain vaccinations are up-to-date, including vaccinations against pneumonia for older family members.
    - In an emergency, don’t immediately leave home if there is an emergency. Sometimes it is safer to stay indoors. Listen to the radio or television for instructions.
    - Neighbors should be aware of other neighbors, friends, or relatives who may need help during an emergency. Know whom to notify to assist them.

- Store emergency supplies such as food, water, pet supplies, and medicines in your home.

References

Report on Wisconsin Homeland Security; State of Wisconsin Preparedness Report; Public Health Preparedness: Strengthening CDC's Emergency Response – A CDC Report on Terrorism Preparedness and Emergency Response (TPER) Funded Activities.

Auf der Heide, E. *The Importance of Evidence-Based Disaster Planning*, U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, Atlanta, Georgia, 2006.

Citizens Corps, Community Emergency Response Teams (CERT). Retrieved on March 15, 2010 from http://www.citizencorps.gov/cert/.

Frieden, L., *Saving Lives: Including People with Disabilities in Emergency Planning*, National Council on Disability, Washington D.C. 2005.

Wisconsin Department of Health Services. *Preparedness of the Wisconsin public health system to respond to public health emergencies.* Report to the Governor and Legislature. 2009.

Trust for America's Health. *Ready or Not? Protecting the Public's Health from Diseases, Disasters, and Bioterrorism*. 2009.

EQUITABLE, ADEQUATE, STABLE PUBLIC HEALTH FUNDING

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Adequate and stable public health funding means financing the broad governmental public health system to assure equitable provision of public health services across the life span. Financing of Wisconsin's public health system must be stable and adequate to meet the goals of *Healthiest Wisconsin 2020* and address the objectives of the 23 focus areas for the decade and beyond.

Importance of the Focus Area

Governmental public health departments in Wisconsin are required by state statute to carry out regulatory, program, and service mandates. Wisconsin's public health statutes and administrative rules are some of the most current in the United States. These mandates are largely unfunded by state resources and instead are funded by federal resources, local tax dollars, program revenue, or outside grants. The level of state funding severely limits the ability of Wisconsin to address its public health problems and represents a missed opportunity to improve the health of the people of Wisconsin and thereby realize significant savings in reduced health care costs gained through improved health across the life span for all.

Despite its progressive public health policy, Wisconsin is heavily dependent on federal funds and local property tax levy revenues to finance state and local governmental public health activities. State revenue funds account for only 7 percent of available dollars to support public health efforts to prevent disease and improve the health of Wisconsin residents. The remaining 93 percent of funding for the system comes from federal grants and local tax levy (these two categories make up 75 percent of the funding), and small private grants, donations, program revenue, and segregated appropriations.

Reliance on federal funds limits the ability of state and local lawmakers and health officials to address Wisconsin's highest priority public health needs, since these revenue sources are usually restricted and cannot be used in a flexible manner. The federal restrictions on use of these funds can dictate priorities that are not the community's priority. The following is a brief description of each type of funding source.

Federal funds refer to grant money received from the federal government. These funds are usually received by the Wisconsin Division of Public Health, which retains approximately 20 percent to fund its programs. Most of this federal funding is passed on to local partners, including local health departments (about 17 percent) and private community-based organizations (the remaining 63 percent). Federal funds are designated for specific purposes, such as the Maternal and Child Health Block Grant; the Women, Infants and Childrens (WIC) Program; Immunization Grants, Public Health Preparedness Grants; and the Prevention Block Grant.

State funds (7 percent of public health funding in Wisconsin) refer to state general purpose revenue funds (taxes) granted to the Wisconsin Division of Public Health, which retains about 12 percent for programs and operations, and allocates approximately 26 percent to local health departments and 62 percent to private community-based organizations. These state general purpose revenue funds support a wide range of prevention programs in local communities; for example, lead poisoning prevention, the Wisconsin Well Woman Program, and cancer screening programs.

Program revenue funds are those collected by state or local governments for services such as licensing, fees, certifications, and registrations. Donations are any monies received as gifts. Non-governmental source grants are funds obtained through a competitive grant process from private foundations such as the Robert Wood Johnson Foundation, the Wisconsin Partnership Program, the Healthier Wisconsin Partnership Program, and the United Way.

The challenges and inherent problems associated with heavy reliance on federal funding and local taxes include the following:

- All federal revenue is categorical: if priorities and appropriations change at the federal level, it directly affects the capacity of Wisconsin public health programs and the workforce needed to provide health protection and health intervention for serious health disparities that affect the quality of life for all people in Wisconsin. Such changes affect Wisconsin's ability to rapidly respond to current and emerging threats to the health of the public.

- If significant decreases in federal funding occur, which is likely given the national economic picture, state and local health departments will need to drastically reduce the services they provide. For example, reductions in the Maternal and Child Health Block Grant during the last presidential administration (years 2000 - 2008) made it more difficult for the state and local health departments to meet the health needs of mothers and infants in Wisconsin.

- Because state and local funding for public health is small, and decreasing, governmental public health departments and their public health system partners are finding it difficult to fulfill effectively their mission to improve health in Wisconsin. Gains made in the past may be lost.

- Health priorities in Wisconsin will be driven by the federal agenda. For example, if Wisconsin's Department of Health Services determines that groundwater protection, diabetes prevention, and reductions in infant mortality are important, it has little discretionary revenue to direct to these priorities. The priorities that are deemed important at the federal level may not be what are most important for improving the health of the people of Wisconsin.

- Significant variation exists in the tax bases of Wisconsin's 72 counties. Wealthier counties can provide a broader and deeper array of public health programs and services, leading to geographic disparities in service availability and delivery across the state. Thus, Wisconsin is a patchwork of variability with respect to public health service delivery. Residents of counties contributing little local tax levy receive fewer preventive services, while counties contributing more local tax levy support better-funded, more comprehensive public health services.

Wisconsin's state health department is dependent on federal revenue to finance 75 percent of its public health activities. Local health departments are dependent on the local property tax levy for 50 percent of their funding and on federal dollars for 25 percent of their funding to finance public health activities. In 2005, general purpose revenue (state) funds contributed 7.5 percent of the state health department budget and 6.6 percent of local health department revenues.

Wisconsin Data Highlights

- State funding for public health ranges dramatically across the county from a low of $3.55 per person in Nevada to a high of $169.92 per person in Hawaii. The national median is $28.92 per person (Trust for America's Health, 2010).

- In 2009, Wisconsin was listed as lowest of the 50 states for per-capita state funding of public health. Wisconsin's spending on public health is about one-third of the national average ($35.43 versus $93.53) (United Health Foundation, *America's Health Rankings*, 2009*)*.

- A 2009 report prepared by the United Health Foundation lists Wisconsin as 50th out of the 50 states for per-capita state funding of public health.

- An analysis by Trust for America's Health (2008) indicates that the application of evidence-based prevention programs to improve health and prevent disease can provide a 6.2 to 1 return on investment in health care savings for Wisconsin.

- Trust for America's Health indicates that, in federal fiscal year 2008, Wisconsin ranked 43rd out of 50 states for federal grant funding from the U.S. Centers for Disease Control and Prevention.

- Trust for America's Health indicates that, in federal fiscal year 2008, Wisconsin ranked 46th out of 50 states for federal grant funding from the Health Resources and Services Administration.

- A survey of Wisconsin's local health departments conducted in 2005 found that local tax levies supported approximately 50 percent of the work of county and municipal health departments (*Wisconsin Local Health Department Survey*, 2007).

- Recommendations in a 2007 public health funding report prepared for the Wisconsin Public Health Council called for an annual increase in state funding of $33 million a year for state and local health departments to focus on the issues of alcohol abuse, obesity, and health disparities.

- A 2007 report card on the health of Wisconsin prepared by the University of Wisconsin's School of Medicine and Public Health graded the overall health of the people of Wisconsin a "B minus." The same report, however, gave an overall grade of "D" for health disparities in Wisconsin. At the time of the report card, Wisconsin's rank for one measure of health (age-adjusted mortality) had slipped from 11 to 14 over the prior 10 years, and if these trends continue, would slip to 18 in another 10 years.

Objective 1

By 2020, increase public health funding from diverse sectors to implement the objectives of *Healthiest Wisconsin 2020*.

Objective 1 Indicator

Wisconsin's state rank in per-capita public health funding from all sources (federal, state, and local sources) (Trust for America's Health, *Shortchanging America's Health* report).

Objective 1 Rationale

Health indicators suggest that Wisconsin is falling behind other states concerning the health of state residents. Wisconsin needs to effectively use an adequate and stable mix of resources – from federal, state, local, and private sources – to address the priorities of the 2020 State Health Plan and improve the health of the population.

Objective 2

By 2020, establish stable revenue sources to support state and local governmental health departments for public health services required by Wisconsin statute.

Objective 2 Indicator
Wisconsin's state rank in per-capita state funding for public health (United Health Foundation's *America's Health Rankings* report).

Objective 2 Rationale
Wisconsin has unique public health challenges. For example, *America's Health Rankings* indicates that Wisconsin is the worst in the nation for binge drinking. Also, the University of Wisconsin Population Health Institute gave Wisconsin a grade of "D" for health disparities. To significantly improve the health of the public by addressing these and other priorities of *Healthiest Wisconsin 2020* will require sufficient, flexible and stable state public health funding.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Wisconsin's Public Health Council (2007) released a report calling for additional state investment to support state and local public health initiatives to reduce the burden of health disparities, alcohol abuse, and obesity in the Wisconsin population.

- The University of Wisconsin Population Health Institute, in its report, *What Works? Policies and Programs to Improve Wisconsin's Health*, presents evidence indicating that "adequate and stable financing of local health departments" is an effective policy approach to help save lives and improve the quality of life.

References

America's Health Rankings. 2009. United Health Foundation.

Health of Wisconsin Report Card. 2007. University of Wisconsin School of Medicine and Public Health – Population Health Institute.

Increased State Financing of Governmental Public Health – A Proposal to the Public Health Council. 2007. Public Health Council Ad Hoc Finance Committee.

Wisconsin Local Health Department Survey, 2005. Wisconsin Department of Health Services. 2007.

Opportunities to Make Wisconsin the Healthiest State. 2008. University of Wisconsin School of Medicine and Public Health – Population Health Institute.

Prevention for a Healthier America. 2008. Trust for America's Health.

State Health Data – Wisconsin. 2009. Trust for America's Health.

Trust for America's Health. *Shortchanging America's Health. A State by State Look at How Public Health Dollars Are Spent.* Washington D.C. March, 2010.

Trust for America's Health. Shortchanging America's Health. Washington D.C. 2009.

United Health Foundation, *America's Health Rankings*, 2009.

What Works? Policies and Programs to Improve Wisconsin's Health. 2009. University of Wisconsin School of Medicine and Public Health, Population Health Institute.

HEALTH LITERACY

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Health literacy means the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Institute of Medicine, 2004).

- Health literacy goes beyond the individual. It depends upon the skills, preferences, and expectations of health information providers, physicians, nurses, administrators, policy leaders, home health workers, media, health educators, environmental health specialists, nutritionists, epidemiologists, and many others.

- Health literacy arises from a convergence of education, health services, and social and cultural factors, and brings together research and practice from diverse fields (Institute of Medicine, 2004).

- Health literacy is the capacity of individuals, organizations and communities to obtain, process, understand and share basic health information and services needed to make appropriate health decisions (Wisconsin Literacy, Inc., 2008).

Importance of the Focus Area

Health literacy has a significant influence on our daily lives. Imagine a mother with a sick baby who misunderstands the doctor's instructions for giving cough medicine to the child. As a result she accidentally gives the baby two *tablespoons* rather than two *teaspoons* of medicine, causing a severe reaction that requires rushing the baby to the emergency room in an ambulance. With more careful consideration for the communication process on the part of the health provider and the health care system this accident may have been avoided.

Health literacy affects the ability of people to understand and process health information, such as deciding how much cough syrup to give a child, choosing a health plan, preparing for a medical procedure or finding and maneuvering within a health care facility. People with low literacy skills use more health services, take more prescriptions, are more likely to have chronic conditions, and experience poorer health outcomes (Potter, 2005); and they are also less likely to seek out preventive health care and screenings such as mammograms and immunizations (Scott, Gazmararian, Williams, et al., 2002).

In *Health Literacy: A Prescription to End Confusion*, the Institute of Medicine (2004) reported that 90 million people in the United States, nearly half the adult population, have difficulty understanding and using health information. Certain groups have an especially high occurrence of low literacy. These include the elderly, the poor, immigrants, people who have completed fewer years of education, people of certain racial or ethnic groups, and people with lower cognitive ability (Kirsch, 2002; Baker, 2000).

In addition to the human suffering, the economic costs of low health literacy are profound. Low health literacy costs the Wisconsin economy an estimated $3.4 billion to $7.6 billion annually. These costs are related to higher health care expenditures due to additional hospital and medical office visits, longer hospital stays, extra tests and procedures, and more prescriptions. Medicaid, Medicare, employers, and patients pay these costs (Vernon, 2007).

Addressing these challenges will require a systems approach. It will take cross-sector leadership to raise awareness of the importance of Wisconsin's health literacy issues and decrease the effects of low literacy on health outcomes. According to *What Works: Policies and Programs to Improve Wisconsin's Health*, programs and policies for health literacy improvement can reach up to half of the population when there is collaboration between partners from government, education, health care, business, and community organizations (Booske, 2009).

Both oral and written language skills are important to health literacy. Patients need to express their health concerns and describe their symptoms accurately. They need to ask pertinent questions, and not only understand written instructions but also understand spoken medical advice or treatment directions. In an age when responsibility for health care decisions is shared between patients and their physicians, patients need strong decision-making skills (National Network of Libraries of Medicine, 2010).

Surveys are often given to patients, asking them to assess the quality of patient-provider interaction in hospital and clinic settings. This feedback is used to improve the system of care, improve medical staff communication skills with patients, reduce medication errors, increase patient understanding and compliance with doctor's advice, and help patients better manage a chronic disease (U.S. Department of Health and Human Services, 2009).

To date, approximately 1,500 peer-reviewed articles have been published on health care inequalities and low literacy skills (Rudd, 2009). Researchers are in the process of

identifying promising practices to add to the modest but growing list of interventions that work. These interventions need to be shared, implemented and evaluated if they are to add to the knowledge base and collective action needed to improve health literacy.

Involving consumers in the development and evaluation of printed, oral, and electronic health communications is important to improving health literacy. Community health centers, Adult Basic Education programs, and English as a Second Language classes are excellent settings in which to pre-test educational materials during their development.

Participation in materials development by the target audience can improve "informed consent" forms, enhance understanding of successful patient-provider interactions, and result in educational materials that are culturally and linguistically appropriate. For example, positive behavior change was documented in a smoking cessation program designed for pregnant women of color who were smokers and had low reading comprehension levels. Program results showed that those women who were given informational materials written at the third-grade level were more likely to achieve abstinence/cessation from tobacco during pregnancy and six weeks post-partum than those who received standard materials (Lillington L, Royce J, Novak D, et al., 1995).

More research and evaluation are needed to develop and assess evidence-based health literacy interventions that are tied to specific improvements in health outcomes. Although such actions call for creativity, partnerships and perseverance, the outcomes will assure that people are better able to understand and participate in their health care and health decisions.

Data Highlights

- In Wisconsin, 7 percent of people 16 years of age and older lack basic writing skills. At the county level, the rates are projected to range from 4 percent to 11 percent (National Center for Education Statistics, 2006).

- Low health literacy costs the Wisconsin economy an estimated $3.4 billion to $7.6 billion annually (Vernon, 2007).

- The 2007-2008 high school graduation rates in Wisconsin reflect disparities by race and ethnicity. These disturbing findings show that graduation rates for Blacks/African Americans, American Indians and Hispanics/Latinos were significantly below their Asian and White counterparts (Wisconsin Department of Public Instruction, 2009).

Race/Ethnicity	Graduation Rate 2007-2008
Blacks/African Americans	67 percent
American Indians	75 percent
Hispanics/Latinos	75 percent
Asians	90 percent
Whites	93 percent

- Parents with low literacy skills are less likely to take their children for well-child visits and report fewer dental check-ups for themselves and their children. They struggle to understand health risks, manage their own health and the health of their family (U.S. Office of Disease Prevention and Health Promotion, 2007).

- People with low literacy are less likely to comply with prescribed treatment and less likely to demonstrate self-care skills. They are more likely to make medication errors and lack the skills needed to navigate the health care system (Weiss, 1999).

- Racial and ethnic minority and immigrant populations bear more consequences of poor health outcomes due to lower levels of health literacy (Institute of Medicine, 2004).

- Estimates based on national survey results indicate that 41 percent of Hispanics/Latinos, 24 percent of African Americans, and 25 percent of American Indians/Alaskan Natives have low health literacy (Kutner, 2006).

Objective 1

By 2020, increase awareness of the impact of literacy and health literacy on health outcomes.

Objective 1 Indicators

- Proportion of Adult Basic Education and English Language Learners programs that include a health literacy component. (Indicator to be developed.)
- Proportion of health professional curricula that include literacy and health literacy. (Indicator to be developed.)
- Number of organizations represented at annual Wisconsin Health Literacy summits. (Indicator to be developed.)

Objective 1 Rationale

Although the association between low health literacy and poor health outcomes is increasingly acknowledged by many sectors in Wisconsin's public health system, a pressing need exists to expand awareness among all sectors identified in the *Healthiest Wisconsin 2020* framework. By understanding the magnitude and effects of the problem, partners can begin to implement strategies to improve oral and written health communications. These strategies include selecting easy-to-read educational materials for consumers, using application forms and consent forms with lower reading levels, developing discharge and prescription information in large print, and using materials that are culturally and linguistically appropriate. Clearer communication and understanding will help reduce medical errors and increase compliance with medication instructions, disease management, preventive screenings and self-care regimens.

Objective 2

By 2020, increase effective communication so that individuals, organizations, and communities can access, understand, share, and act on health information and services.

Objective 2 Indicator

Proportion of health care providers with effective consumer communication (Consumer Assessment of Healthcare Providers and Systems (CAHPS) – Indicator to be developed.)

Objective 2 Rationale

Health literacy improvement is a shared responsibility between patients, families, providers, and organizations, with increasing responsibility on the health care system to make certain that health information is written at a level that can be understood by patients, and that oral and written communication are culturally and linguistically competent. In this era of shared decision-making in health care, an informed consumer will have greater ability to make decisions that are positive, proactive, and health-promoting. Knowledge and information improve self-care knowledge, skills, and abilities that in turn have a beneficial effect on the health of individuals, families, and communities.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Over 9,000 Head Start families enrolled in a health literacy program were tracked in 53 states, affecting nearly 20,000 children. Parents were trained to use the easy-to-read medical guide *What to Do When your Child Gets Sick* (Mayer and Kuklierus, 2005),
- which offered clear information on more than 50 common childhood illnesses. The University of California at Los Angeles and the Johnson & Johnson Health Care Institute for Head Start conducted the study and found that visits to a hospital emergency room or clinic dropped from 58 percent to 42 percent following the intervention (Herman, 2007).

- Linguistically appropriate services can improve patient-provider communication, decrease risks to patient safety, and improve patient satisfaction and clinical outcomes. Karliner (2007) found positive benefits of interpreter services on communication, patient satisfaction, and clinical outcomes.

- *Health Literacy Practices in Primary Care Settings: Examples from the Field* identifies five promising health literacy practices that primary care providers commonly use to improve communication with patients during clinical visits. This report, prepared by the Association of Clinicians for the Underserved, suggests that patients can receive high-quality, patient-centered care regardless of any difficulties they may initially have with low health literacy (Barrett, et al., 2008).

References

Baker DW, Gazmararian JA, Sudano J, et al. The association between age and health literacy among elderly persons. J Gerontol Series B-Psychol Scien Soc Scien 2000;55(6):S368-74.

Barrett, S.E., Puryear, J.S., and Westpheling, K. Health Literacy Practices in Primary Care Settings: Examples from the Field, The Commonwealth Fund, January 2008.
Booske BC, Kindig DA, Nelson H, Remington PL. *What Works? Policies and Programs for a Healthier Wisconsin.* University of Wisconsin Population Health Institute, July 2009.

Herman, A. *Empowering Parents, Benefiting Children: A Study of the Impact of Health Literacy Training on Head Start Parents and the Healthcare System*. UCLA Anderson School of Management/Johnson and Johnson Health Care Institute, 2007.

Institute of Medicine. 2004. *Health Literacy: A Prescription to End Confusion.* Nielsen-Bohlman L, Panzer AM, Kindig DA, Editors, Committee on Health Literacy. Washington, DC: The National Academies Press.

Karliner, E.S., Jacobs, E.A., Chen, A.H., Mutha, S. *Do Professional Interpreters Improve Clinical Care for Patients with Limited English Proficiency? A Systematic Review of the Literature.* Health Serv Res 2007; 42(2):727-54. (Accessed on 1/25/2009 by Booske et al 2009)

Kutner M, Greenberg E, Jin Y, Paulsen C. *The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy*. U.S.

Kirsch I, Jungeblut A, Jenkins L, et al. *Adult Literacy in America: A first look at the findings of the National Adult Literacy Survey*. 3rd edition. Vol. 201. Washington, D.C.: National Center for Education, U.S. Department of Education, 2002.

Lillington L, Royce J, Novak D, et al. Evaluation of a smoking cessation program for pregnant minority women. Cancer Practice 1995; 3(3):157-63.

Mayer, G. and Kuklierus, A. *What To Do When Your Child Gets Sick.* Institute for Healthcare Advancement, 2005. LaHabra, CA.

National Center for Education Statistics, 2006.
[Online] Retrieved March 17, 2010 from
http://nces.ed.gov/naal/estimates/StateEstimates.aspx

National Network of Libraries of Medicine. 2010. Bethesda MD. [Online]. Retrieved March 17, 2010 from http://nnlm.gov/outreach/consumer/hlthlit.html

Potter L, Martin C. (2005), *Health Literacy Fact Sheets.* Family Health Research; Center for Health Care Strategies, August.

Rudd R. Research in Health Literacy: Identifying the Gaps. Presentation given at Institute for Healthcare Advancement 8th Annual Health Literacy Conference, Thursday, May 7, 2009. [Online]. Retrieved March 17, 2010 from http://www.iha4health.org/default.aspx/MenuItemID/337/MenuGroup/_Health+Literacy+Conference.htm

Scott, TL, Gazmararian JA, Williams MV, et al. Health literacy and preventive health care use among Medicare enrollees in a managed care organization. Med Care 2002;40(5):395-404.

U.S. Department of Education. Washington DC: The National Center for Education Statistics, 2006.

U.S. Department of Health and Human Services. Agency for Healthcare Research and Quality. Consumer Assessment of Healthcare Providers and Systems (CAHPS), 2009. [Online]. Retrieved March 17, 2010 from https://www.cahps.ahrq.gov/default.asp

U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion, 2007. *Health Literacy Crucial to Good Health*. Prevention Report, 19 (4).

Vernon J, Trujillo A, Rosenbaum S, and DeBuono B. 2007. Low Health Literacy: Implications for National Policy. [Online]. Retrieved March 17, 2010 from http://www.npsf.org/askme3/pdfs/Case_Report_10_07.pdf

Weiss, Barry D. 1999. 20 Common Problems in Primary Care. McGraw Hill, New York, NY.

Wisconsin Department of Public Instruction. 2009. WINSS Successful School Guide. [Online]. Retrieved on March 17, 2010 from http://dpi.wi.gove/sig/index.html

Wisconsin Literacy, Inc. (2008). *Improving Health Literacy – A Strategic Plan for Wisconsin.*-Wingspread Executive Summary, November. [Online]. Retrieved March 17, 2010 from http://www.wisconsinliteracy.org/

PUBLIC HEALTH CAPACITY AND QUALITY

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Public health capacity and quality means developing and carrying out the core public health legal and professional responsibilities in every community. This includes assuring that the public health core functions and essential services are carried out by the state health department, by local health departments and by other governmental public health partners. An efficient and effective public health system is created by:

• Assuring capacity and quality in health departments and quality in other governmental public health agencies, including public health laboratories.

• Supporting accreditation of state and local health departments.

• Exploring collaboration with others to increase capacity.

Importance of the Focus Area

Public health departments must have the capacity – which includes adequate funding and a sufficient, competent and diverse workforce - to improve and protect the health of the community. Every person in every community should have access to a basic level of public health services from both the state health department and the local health department. In Wisconsin, the minimum level of public health services is defined in state statute and administrative rules, and includes the 10 essential public health services recognized across most states in the United States. Wisconsin Statute 250.03(L) lists 10 essential services to be carried out by the public health system (originally published as part of the *Public Health in America Statement*, 1994). Those who help carry out one or more of the 10 essential public health services are part of Wisconsin's public health system and important partners in *Healthiest Wisconsin 2020.* The essential public health services include:

1. Monitor the health status of populations to identify and solve community health problems.
2. Investigate and diagnose community health problems and health hazards.
3. Inform and educate individuals about health issues.
4. Mobilize public and private sector collaboration and action to identify and solve health problems.
5. Develop policies, plans, and programs that support individual and community health efforts.
6. Enforce statutes and rules that protect health and ensure safety.
7. Link individuals to needed personal health services.
8. Assure a competent public health workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Provide research to develop insights into and innovative solutions for health problems.

Although there is an evaluation process in place to review the delivery of local health department services related to state statute, there has been little if any focus on the capacity needed to deliver public health services and the quality of services provided. Likewise, there is no review process in place for the state health department.

Clear expectations and standards for the delivery of public health services are necessary to protect and improve the health of the public. Nonetheless, there exists considerable variability in health department capacity and quality, and in the delivery of these essential public health services in every community served by a health department. Wisconsin is not alone; state and local health departments throughout the nation face similar challenges in protecting the health of the public through delivery of the essential public health services.

In response to these challenges, major national public health organizations, including the Centers for Disease Control and Prevention, the Association of State and Territorial Health Officials, and the National Association of County and City Health Officials are moving forward to support voluntary accreditation of state, local, and tribal health departments. The national Public Health Accreditation Board has developed standards and performance measures related to the provision of the essential public health services. Wisconsin also has its own set of standards (state statutes and administrative rules) that define the minimum service delivery requirements for all 92 Wisconsin local health departments. The national and Wisconsin standards will need to be aligned to assure compliance with state laws and administrative rules. Agreed-upon state and national standards will drive health departments to assure the appropriate level of capacity to protect and improve population health.

In addition to assuring the capacity to meet defined standards, health departments must also focus on how effectively and efficiently they are delivering services and attaining desired health outcomes. Health departments are experiencing growing pressure to

improve performance and community health outcomes with insufficient resources. In 2009, Wisconsin was listed as lowest of the 50 states for per-capita state funding of public health. Wisconsin's spending on public health is about one-third of the national average ($35.43 versus $93.53) (United Health Foundation, *America's Health Rankings*, 2009).

Given this situation, health departments need more resources and at the same time need to become more resourceful in delivering services to achieve better outcomes. Quality improvement is a widely recognized strategy for making transformational changes to increase the efficiency and effectiveness of processes and programs within an agency. To sustain efforts that maximize resources and achieve better health outcomes, health departments must create a "culture of quality" by integrating quality improvement throughout the organization.

Wisconsin Data Highlights

- Wisconsin has 92 local health departments providing services to all communities and Wisconsin's 5.6 million people.

- Wisconsin has 11 federally recognized American Indian Tribes.

- The Wisconsin Public Health Quality Initiative is working to establish "communities of practice" among state, local, and tribal health departments to support efforts related to quality improvement implementation. Currently, 24 local health departments and the Wisconsin Division of Public Health are part of this initiative (Institute for Wisconsin's Health, 2010).

- Wisconsin state statute requires that all local health departments be reviewed at least every five years to assure they are providing a minimum level of service to all people and communities in their jurisdiction. In 2006, the Wisconsin Division of Public Health led a process to assess the state public health system's performance related to the 10 essential public health services using the National Public Health Performance Standards.

Objective 1

By 2020, all Wisconsin health departments will implement established quality improvement processes in daily practice.

Objective 1 Indicator
Proportion of health departments in compliance with the Public Health Accreditation Board Standard 9.2 (periodic survey).

Objective 1 Rationale
Health departments must become more effective and efficient in delivering services to achieve better outcomes. To sustain efforts that maximize resources and attain

desired outcomes, health departments must create a "culture of quality" by integrating quality improvement throughout the organization.

Objective 2

By 2020, all Wisconsin health departments will be accredited using an established standard.

Objective 2 Indicators

- Proportion of local health departments and tribal health units that have met either Public Health Accreditation Board or state-adopted accreditation standards.
- Accreditation of the Wisconsin Division of Public Health using either Public Health Accreditation Board or state-adopted accreditation standards.

Objective 2 Rationale

Clear expectations and standards for the delivery of public health services are necessary to protect and improve the health of the public. Agreed-upon state and national standards will drive health departments to assure the appropriate level of capacity to protect and improve population health.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Hold training for the state and local health departments on public health quality improvement processes.
- Develop quality improvement resources for the state and local health departments that specifically connect to strategic planning efforts.
- Connect the state and local health department review process results to quality improvement recommendations.
- Hold training for the state and local health departments on national accreditation standards.
- Develop and implement a strategic plan to move the current process to review local health departments into alignment with national accreditation standards.
- Adopt formal standards of review for the state and local health departments that align with national accreditation standards.

References

Bialek, R., Duffy, G., & Moran, J. (2008) *The Public Health Quality Improvement Handbook.* ASQ Quality Press, Milwaukee, WI.

Institute for Wisconsin's Health, Inc. Retrieved March 12, 2010 from http://www.instituteforwihealth.org

National Network of Public Health Institutes. *MLC: Lead States in Public Health Quality Improvement.* Retrieved March 12, 2010 from http://www.nnphi.org/home/section/1-15/about-us/view/39/

Public Health Accreditation Board. Retrieved March 12, 2010 from www.phaboard.org

United Health Foundation, *America's Health Rankings*, 2009.

Trust for America's Health. Shortchanging America's Health. A State-by-State Look at How Public Health Dollars Are Spent. March 2010. Retrieved March 18, 2010 from http://healthyamericans.org/report/74/federal-spending-2010

PUBLIC HEALTH RESEARCH AND EVALUATION

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Public health research and evaluation means developing and implementing population-based, practice-based research and evaluation of policies, programs, and outcomes to assure that efficient and effective public health interventions are initiated and based on evidence. It includes:

- Developing a prioritized research agenda focusing on the 23 focus areas of *Healthiest Wisconsin 2020*.
- Initiating and participating in program and policy evaluation and research.
- Publishing and reporting results of research and evaluation in practice to improve population health outcomes and advance public health policy and action.

Importance of the Focus Area

Wisconsin has many resources in place to support research and evaluation to help everyone live better, longer. These resources include state and local health departments and tribes, direct care service providers, educational systems, researchers, payer systems, quality improvement projects, professional associations, non-profit organizations, schools of public health, and the Institute for Wisconsin's Health. A prioritized agenda is needed to assure that research and evaluation are systematically implemented by all members of the public health system.

The technical colleges and institutions of higher education represent a critical asset with strong biomedical research capacity. Basic and advanced education is available to support the core governmental public health disciplines including medicine, dentistry/oral hygiene, nursing, health education, nutrition, and environmental and occupational health. The preponderance of research is conducted by institutions of higher education, and although the amount of national resources targeting research has increased, little is directed toward public health research.

Current and future research and evaluation needs

- Enhanced data-sharing collaboration among local health departments by developing comparable data systems that can be readily used for evaluation and research.
- Expanded community-based participatory research in which all collaborators are equitably involved in the research process and the unique strengths of each are recognized.
- Identification of key public health interventions that expand capacity to protect and promote the health of the public, such as developing a nutrition and physical activity agenda; improving environmental and workplace risk communication; decreasing violence and strengthening community capacity to prevent violence; and developing research-based strategies to improve birth outcomes.
- Establishment of sustainable research resources from both the public and private sectors.
- Enhanced capacity to translate research into practice more quickly as a way to implement new strategies to improve health and move community health improvement forward more aggressively.
- Expanded partnerships among local health departments and evaluation of how these partnerships are assimilated into practice (e.g., Perinatal Data System).

There are considerable risks if the availability of public health research does not change. Although research and evaluation efforts will continue at some level they will remain fragmented and their potential isolated. Without a concerted effort to create incentives for public health research through funding, research and evaluation will continue to focus largely on the biomedical model of treating medical conditions rather than on the public health model of prevention. However, with adequate funding, a public health research agenda can be developed and adopted by public health system partners and the results used to focus on prevention and strengthen public health practice.

To move Wisconsin toward the goals of improved health, equity, and elimination of health disparities, it is paramount that research and evaluation move in the same direction. Engaging Wisconsin researchers, focused on Wisconsin population groups, is the best way to assure that research is relevant and useful to the public health system partners. Partnerships that include the sectors identified in the outer ring of the *Healthiest Wisconsin 2020* framework are essential to put research findings into practice, promote effective policies and align systems. Researchers and public health partners require integrated and standardized data systems that provide local, state, and national data.

Many public health programs and services go for years without an evaluation to determine their effectiveness in improving population health outcomes. Infrastructure, the driver of programs, is seldom evaluated since it has been difficult to sustain public health programs long enough to evaluate their success in improving population health outcomes and their ability to modify the powerful factors that influence the health of the public. A comprehensive evaluation model should become a requirement of all health

and equity programs. If program evaluation is built into programs from the start, programs can become more effective and efficient, and best practices shared with others.

Currently, there is no process in Wisconsin to share the effectiveness of research, best practices, promising practices, or evaluation outcomes. To move the health and equity of Wisconsin forward, sharing of valid and reliable methods and instruments is needed. A public health data repository that links data, search engines, and evidence-based programs would improve accuracy and foster translation into practice by the many sectors that constitute Wisconsin's public health system.

Wisconsin Data Highlights

- The 92 local health departments and the Department of Health Services have made notable achievements over the past decade to build partnerships, engaging many of the community partners; this in turn has stimulated growth in program evaluation and participatory community research. These public health departments collaborate on surveillance systems used to track immunizations; Women, Infants, and Children services; communicable diseases; environmental hazards and indicators; maternal and child health services; and others.

- Wisconsin supports both research and community initiatives. The University of Wisconsin Population Health Institute annually ranks the health of every county in Wisconsin and was recently awarded a grant from the Robert Wood Johnson Foundation to develop report cards for all health departments in the U.S. Institutions of higher education are in a strong position to exert influence to assure that sufficient and stable resources are available to support a strong public health system.

- The Wisconsin State Laboratory of Hygiene, Wisconsin's public health reference laboratory, is a national leader. This laboratory provides clinical, environmental, and industrial hygiene analytical services, specialized public health procedures, reference testing, training, technical assistance, and consultation for private and public health agencies. These services are essential to achieve the public health goals of the state.

- The Wisconsin Public Health Council is well-placed to support policy efforts to move a public health research agenda forward.

- Wisconsin has demonstrated strong leadership in the development of electronic medical records and was an early adopter in advancing managed care throughout Wisconsin.

- Direct care services are delivered by provider networks, safety net providers, community clinics, and long-term care-providers. These providers are critical to the public health system in Wisconsin.

Objective 1

By 2020, a broad-based public health research and evaluation council will develop research and evaluation priorities; increase collaboration in research and data sharing; and report to the public about progress.

Objective 1 Indicators

- Establishment of a public health research and evaluation council.
- Publication of priorities and progress reports.

Objective 1 Rationale

A public health research and evaluation council would establish a statewide research agenda rather than having the research needs of Wisconsin determined by more narrowly focused federal and private institutions, agencies, or interests. It would provide a forum in which to share valid and reliable research methods and promote data collection and integrated data systems. It would serve as an expert source for evaluation guidance and a force to incorporate evaluation into public health policies and programs.

Objective 2

By 2020, programs and policies to improve public health in Wisconsin will be science-based, recognized by an expert panel, and include an evaluation.

Objective 2 Indicator

Proportion of programs and policies that are based on research showing effectiveness and that include adequate evaluation to assess effectiveness. (Indicator to be developed.)

Objective 2 Rationale

Program evaluation is an essential organizational practice in public health; however, it is not practiced consistently across program areas, nor is it sufficiently well-integrated into the day-to-day management of most programs (U.S. Centers for Disease Control and Prevention, 1999).

Objective 3

By 2020, research projects will be implemented addressing no fewer than two-thirds of the disparity objectives identified in *Healthiest Wisconsin 2020*.

Objective 3 Indicator

Number of research or evaluation projects either completed or under way judged by the research and evaluation council to meet criteria established by the Minority Health Leadership Council and other stakeholders.

Objective 3 Rationale

Profound disparities exist among people in all stages of life. Disparity can be seen in health behaviors, risk factors (e.g., tobacco use, poor oral health, poor diet [including low consumption of fruits and vegetables], physical inactivity, and

environment and worksite hazards), insurance coverage, access to health care, health outcomes, and disease burden. Understanding the underlying causes of these disparities and co-morbidities is necessary to ensuring effective interventions that address economic, structural, cultural, and individual barriers to optimal health are developed and implemented for diverse population groups and communities (Centers for Disease Control and Prevention [CDC], 2006).

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- Assure that program evaluation is integrated into the day-to-day management of programs.

- Integrate the five elements of program evaluation: (1) use science as a basis for decision-making and public health action; (2) expand the quest for social equity through public health action; (3) perform effectively as a service agency; (4) make efforts outcome oriented; and (50 be accountable (*Framework for Program Evaluation in Public Health*, CDC, 1999; *The Guide to Community Preventive Services*, CDC; *Guide to Clinical Preventive Services*, U.S. Agency for Health Care Research and Quality).

References

Advancing the Nation's Health: A Guide to Public Health Research Needs, 2006-2015 (PDF, 1,577 KB) *(Centers for Disease Control and Prevention, 2006)* Retrieved February 16, 2010 from http://www.cdc.gov/od/science/PHResearch/cdcra/AdvancingTheNationsHealth.pdf

Booske BC, Kindig DA, Nelson H, Remington PL. What Works? Policies and Programs for a Healthier Wisconsin. University of Wisconsin Population Health Institute, July 2009.

Framework for Program Evaluation in Public Health (CDC), MMWR 1999;48 (No. RR-11): [page 1-2]. Retrieved March 12, 2010 from http://www.cdc.gov/mmwr/PDF/rr/rr4811.pdf

The Guide to Community Preventive Services. CDC. Retrieved March 13, 2010 from http://www.thecommunityguide.org/index.html

The Guide to Clinical Preventive Services, U.S. Agency for Health Care Research and Quality. Retrieved March 13, 2010 from http://www.ahrq.gov/clinic/uspstfix.htm

Wisconsin Health Facts: Racial and Ethnic Disparities in Infant Mortality, Wisconsin Department of Health Services, January 2010. Retrieved February 16, 2010 from http://dhs.wisconsin.gov/healthybirths/pdf/infanthealthfactsheet.pdf

SYSTEMS TO MANAGE AND SHARE HEALTH INFORMATION AND KNOWLEDGE

Note to readers and users of the *Healthiest Wisconsin 2020* Profiles: This *Healthiest Wisconsin 2020* Profile is designed to provide background information leading to collective action and results. This profile is a product of the discussions of the Focus Area Strategic Team that was convened by the Wisconsin Department of Health Services during September 2009 through November 2010. The objectives from this Focus Area have been recognized as objectives of *Healthiest Wisconsin 2020*. (Refer to Section 4 of the *Healthiest Wisconsin 2020* plan.) A complete list of *Healthiest Wisconsin 2020* Focus Area Strategic Team Members can be found in Appendix A of the plan.

Definition

Systems to manage and share health information and knowledge means that population health data drive community health assessment, policy development, assurance, service delivery, resource management, and accountability. Systems used to collect, manage and interpret population health data are integrated, accessible, interoperable, broadly used by public health partners, and support the overarching, infrastructure, and health focus areas of *Healthiest Wisconsin 2020.*

Importance of the Focus Area

Information technology is pervasive in society today. It supports and enables many aspects of life and has become the single most important technology in use world-wide. Information technology has revolutionized how business is conducted in all areas except health care, including public health, where adoption and use of health information technology has been slow and information sharing sporadic and often manual.

As stated by the U.S. Department of Health and Human Services (2010), "health information technology allows comprehensive management of medical information and its secure exchange between health care consumers and providers. Broad use of health information technology has the potential to improve health care quality, prevent medical errors, increase the efficiency of care provision and reduce unnecessary health care costs, increase administrative efficiencies, decrease paperwork, expand access to affordable care, and improve population health."

According to the Congressional Budget Office, (2008), health information technology has the potential to significantly increase the efficiency of the health sector by helping health care providers manage information. However, cost-effective delivery of health care

services cannot be achieved unless health information technologies are widely and consistently adopted by health care organizations, public health departments and consumers. Health data must be available where and when they are needed, in a manner that respects individual privacy, and the systems that deliver the data must be secure, highly functional and easy to use.

Health information technology also has the potential to help individuals manage their own information, make better individual health decisions, and work with health care providers to make care and treatment decisions. Health information technology is designed to gather all relevant health information where it is needed, when it is needed, allowing consumers and health care providers see the "big picture" and make decisions accordingly. Health information technology facilitates secure information-sharing both within an individual's primary health care organization and with health care providers outside the primary health care organization when necessary.

The benefits for state and local health departments and their public health system partners are potentially enormous. Public health departments rely heavily on population health data to make decisions on where and how to target services, education, and intervention. Health information technology can deliver data to state and local health departments that are comprehensive, more accurate, and timelier than is possible with the current, often manual, processes. Public health emergency preparedness, response, and recovery programs benefit from this automation, as do communicable disease, environmental and occupational health, and chronic disease surveillance programs, because more information is available to predict and monitor the course of disease outbreaks and monitor progress toward public health goals over time.

Access to and use of population-based data and information are central to protecting health and preventing disease. Integrated data are critical to the effectiveness of local, state, and federal public health systems. Public health information technologies are evolving in Wisconsin to meet the needs of their users and the challenges and opportunities presented by widespread electronic exchange of health information. Such technologies collect, manage, analyze, and distribute the data on which health departments depend.

Many of these technologies are either in place or coming online. Taken together, these data systems cover much of the expected life span of individuals. With access to complete, consistent population health data – within an established legal and technical framework that safeguards individual information and ensures that information is shared only when it is needed – public health departments will for the first time be able to thoroughly evaluate the health of the public and monitor attainment of the state health plan goals.

Progress has been made but much remains to be accomplished before Wisconsin has an integrated electronic public health infrastructure capable of delivering statewide and community-level data. The challenge for public health is to maintain existing capabilities while expanding its ability to communicate not only with the health care

sector but with collaborating partners from government, the public, private, nonprofit, civic, and voluntary sectors, all in the face of contracting and uncertain funding. Wisconsin health care organizations, state and local public health agencies, and consumers must embrace the health information technology initiative now under way at the state and national level. Failure to do so will put health care increasingly out of reach financially for many consumers, will markedly decrease the health and well-being of the citizens of Wisconsin, and will put health care organizations who do not adopt these technologies at a competitive disadvantage.

Wisconsin Data Highlights

- Wisconsin has in place, or is implementing, data systems to support immunizations, vital records, communicable disease surveillance, electronic laboratory reporting, business intelligence, maternal and child health, environmental tracking, and the Women, Infants and Children (WIC) program.

- Wisconsin is developing, as part of the federal health information technology initiative, a governance structure and plan for improving the quality and quantity of health information available through the electronic exchange of information among health care providers, local health departments, and consumers.

- Automated information exchange between health care systems and public health systems is becoming more common as demonstrated in the exchange of immunization records, electronic laboratory reporting, and birth reporting.

- Hospital admission, discharge, and transfer data for monitoring emerging health threats in southeast Wisconsin now comes to the state and local health departments through the Wisconsin Health Information Exchange.

- Statewide health care claims data spanning multiple systems and settings (physician offices, outpatient services, pharmacies, laboratories, and hospitals) are available to state and local health departments through the Wisconsin Health Information Organization.

- Funding to support major public health data systems is uncertain from year to year and often associated with specific program objectives set by federal government agencies. Consequently, public health departments often have little discretion about which information technology initiatives they pursue.

- Specific programs often have access to good-quality data about their activities but this is not universally true. Complicated data-use agreements often pose barriers to data access and integration. In other cases, data are not complete: for example addresses are not standardized and geocoded.

- In many cases the data in a given system are of high quality and of value to many program areas, but unavailable because of technical and/or programmatic limitations.

As a result, programs have difficulty developing a comprehensive picture of a given client or population group.

Objective 1

By 2020, there will be efficient, appropriate, and secure flow of electronic information among health information systems to optimize decisions for personal and community health.

Objective 1 Indicator
Proportion of hospitals, physicians and clinics that meet the 2013 federal *meaningful use* criteria.

Objective 1 Rationale
Decisions related to personal and community health are currently made with incomplete and often out-of-date information. The most significant cause is the inability of health information systems to securely and efficiently exchange information. A secondary cause is the inability to make the information available to providers in a form that is convenient and appropriate to the situation and to consumers in a form that visually clear and easily understandable. The ability to exchange information between and among systems -- those used by health organizations, health departments, and consumers -- will improve the overall quality of decision-making by ensuring that decisions are informed by the latest and most complete information available.

Objective 2

By 2020, access to nationally certified electronic health record systems and health information exchange will be available to all health consumers, providers, and public health officials.

Objective 2 Indicator
Proportion of physicians, hospitals and patients with *certified electronic health record systems*.

Objective 2 Rationale
Sound health decisions cannot be made by consumers, providers, or health departments without access to complete and timely information delivered in a consistent format. Access to nationally certified electronic health record systems will ensure that the data used for decision-making are accurate and consistent, because the certification process will ensure that the systems that collect and exchange data have met rigorous criteria and standards for accuracy, consistency and usability.

Objective 3

By 2020, electronic health information systems will collect comparable data allowing measurement of the magnitude and trends of disparities in health outcomes and determinants of health for those with disabilities and among populations of differing

races, ethnicities, sexual identities and orientations, gender identities, and educational or economic status.

Objective 3 Indicators

- Proportion of Division of Public Health periodic surveys and program data systems that collect this demographic information uniformly. (Indicator to be developed.)
- Proportion of hospitals, physicians and clinics that meet the 2013 federal *meaningful use* criteria for demographic information collection.

Objective 3 Rationale

Health disparities cannot be identified, let alone reduced, without the ability to accurately measure the depth and breadth of the disparity and how it changes over time. Adoption of electronic health records by providers will greatly improve the ability of health departments and their public health system partners to identify and measure the extent of disparities for those with disabilities and among populations of differing races, ethnicities, sexual identities and orientations, gender identities, and educational or economic status. Existing statewide public health surveillance efforts are incomplete because data systems that capture disability information are fragmented, definitions of disability are not standardized across data sources, and population-based and administrative data related to disabilities are not effectively analyzed to document health status and health-related needs of those with disabilities.

Potential evidence- or science-based actions to move the focus area objectives forward over the decade

- The adoption of nationally recognized health information technology standards and protocols for data exchange and nationally certified electronic medical record technologies for capturing encounter, test, and order data will be enabled by the U.S. Department of Health and Human Services.
    - Adoption of these standards, protocols, and technologies will be encouraged at the federal level by the U.S. Department of Health and Human Services through the use of incentive payments to eligible professionals and hospitals.
    - Adoption of these standards, protocols, and technologies will be encouraged at the state level by the Wisconsin Department of Health Services through the efforts of the Wisconsin eHealth Program and its Wisconsin Relay of Electronic Data (WIRED) for Health Board.

References

Evidence on the Costs and Benefits of Health Information Technology, Congressional Budget Office, 2008. Retrieved March 15, 2010 from http://www.cbo.gov/ftpdocs/91xx/doc9168/05-20-HealthIT.pdf

HealthIT is a joint effort of the Office of the National Coordinator for Health Information Technology (ONC), and the Agency for Healthcare Research and Quality (AHRQ) Retrieved March 15, 2010 from http://healthit.hhs.gov/portal/server.pt

Report to the Office of the National Coordinator for Health Information Technology on Defining Key Health Technology Terms, National Alliance for Health Information Technology. Retrieved March 15, 2010 from http://www.dhs.wisconsin.gov/eHealth/Resources/index.htm

Stimulating the Adoption of Health Information Technology, The New England Journal of Medicine, Health Care Reform Center website. Retrieved March 15, 2010 from http://content.nejm.org/cgi/content/full/360/15/1477%29