

Central Vermont Medical Center

Community Health Needs Assessment 2013



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Assessment Introduction:

Central Vermont Medical Center (CVMC) conducted a Community Health Needs Assessment (CHNA) in 2012 to gain understanding of the health status of central Vermont and identify areas of need in our community. This assessment was designed to fulfill the requirements outlined by the 2010 Federal Patient Protection and Affordable Care Act that mandates all not-for-profit, tax-exempt hospitals to conduct a CHNA every three years and adopt an implementation plan. A collaborative Steering Committee was formed in April 2012 to provide ongoing guidance throughout this CHNA process. The Steering Committee was comprised of health care leaders and public health officials from around the central Vermont region to represent a broad cross section of CVMC's health care community.

Our mission at Central Vermont Medical Center is to ***work collaboratively to meet the needs and improve the health of the residents of central Vermont.*** Periodic assessment of community health needs is a critical component to this mission for developing new strategic plans for the future. CVMC offers a full spectrum of comprehensive inpatient and outpatient care services with 24/7 emergency care, cancer care at National Life Cancer Treatment Center and Central Vermont Oncology, Rehabilitative Services, Woodridge Rehabilitation & Nursing, and 18 medical group practices. As a Medical Center, CVMC realizes its responsibility to not only address health problems as they occur, but to play an active role in anticipating and preventing health problems before they happen in the community.

We would like to acknowledge the labors of the many devoted organizations and efforts underway in our community. As the largest provider of health care in the region, CVMC believes maintaining alliances at all levels in the community is of the utmost importance. Aligning our goals with local, state, and federal organizations helps to remove silos, reduce redundancy, clarify our purpose, and ultimately, improve our effectiveness.

A significant resource is our participation in Fletcher Allen Partners that began in October 2011. This affiliation with Fletcher Allen Health Care, Champlain Valley Physicians Hospital Medical Center, and Elizabethtown Community Hospital under Fletcher Allen Partners has enabled us to better coordinate and improve the care we deliver to patients while making the best use of our collective resources. Our communities expressed the importance of formally affiliating our community hospital with a tertiary care, teaching facility. The benefits of this alliance remain impressive in the area of financial economies and clinical quality improvement projects. We place high value on our membership in Fletcher Allen Partners.

It was necessary throughout this assessment to consider environmental factors, access to healthcare, healthy lifestyle choices, and other socioeconomic factors that form the foundation of the central Vermont communities. The combination of this information with healthcare specific data resulted in an assessment and community-wide health improvement plan to address the following health issues listed in alphabetical order.

- Healthy Living
- Immunization Rates
- Prenatal Care
- Transportation
- Youth Obesity

Methodology:

Our Community Health Needs Assessment was completed using both qualitative and quantitative research techniques. Initially, members of the CVMC Steering Committee gave verbal reports on the issues they believed to be most pressing in their organizations or in the general central Vermont community. From there, the Steering Committee reviewed the recommended list of health and socioeconomic indicators provided by the Vermont Department of Health (VDH) and gathered data pertaining to population demographics, access to health services, maternal and child health, health status and prevention, and social-environmental measures to evaluate these concerns. This secondary research coupled with the Steering Committee's concerns allowed significant conclusions to be drawn and CVMC's priority health needs to be selected.

Qualitative Data

1. **Steering Committee:** We invited a wide variety of public health professionals, community leaders, human service providers, and CVMC staff members to serve as a Steering Committee throughout our CHNA process. Meetings were held throughout 2012 for the committee members to deliberate over all community health concerns and review pertinent data and information. We have included the discussion guide that was used to direct the dialogue of these meetings in Appendix B of this report. The Steering Committee developed a final list of most pressing community health needs to be recommended as the priorities for this CHNA. The committee consisted of members from the following organizations who were designated to be, "the voice of the community" and communicate the challenges confronting the larger central Vermont population.
 - a. Washington County Mental Health
 - b. Central Vermont Home Health & Hospice
 - c. Peoples Health and Wellness
 - d. U32 High School
 - e. Central Vermont Council on Aging
 - f. Green Mountain United Way
 - g. Vermont Department of Health
 - h. Central Vermont Medical Center

2. **Community Reports:** At the outset of this project, the Steering Committee reviewed and reevaluated a number of past resources in order to draw meaningful conclusions from our current data. In 2004 and 2007, CVMC collaborated with Green Mountain United Way and the Barre District of the Vermont Department of Health to carry out Act 53 Community Needs Assessments for Central Vermont Medical Center. Review of these reports allowed us to evaluate areas of community progress as well as regression and recognize which of our current needs were similar to those identified in 2004 and 2007. Using the trends we found, we were able to determine the areas where additional resources are essential and what methods have proven to be effective in addressing needs in the past.

The Steering Committee also thoroughly reviewed the CVMC Community Health Needs Assessment completed by the Barre District Office of the Vermont Department of Health. Our final priorities chosen by the Steering Committee closely dovetailed with the recommendations from the Barre District Office. The recommendations from the Barre District Office reported on the broad spectrum of health issues in our community including access to care, mental health, alcohol use, marijuana use, obesity, oral health, and tobacco use. As some of these issues fall outside of CVMC's extent of operations, the Steering Committee prioritized those of these issues that fit into mission statement and facility capabilities.

Quantitative Data

3. **Review of Relevant Publications:** CVMC staff and the Steering Committee evaluated the surrounding community using relevant reports presented by state and federal agencies, as well as local non-profit organizations including:

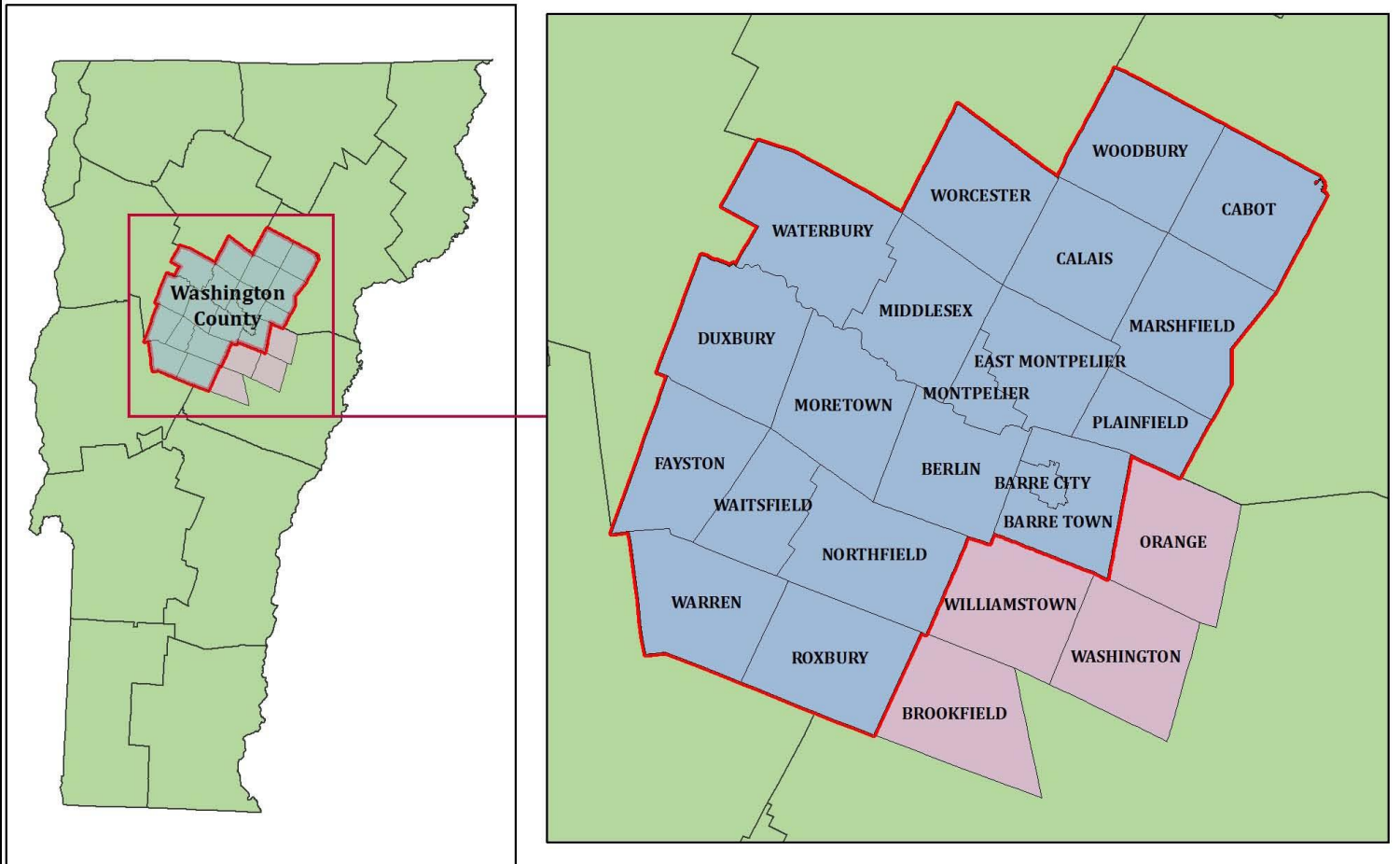
- Centers for Disease Control and Prevention
- Green Mountain Transit Authority: Transit Development Plan
- Vermont Department of Health Access
- Vermont Department of Health
- Vermont Department of Financial Regulation
- U.S. Census Bureau
- U.S. Department of Health and Human Services
- U.S. Department of Commerce
- Voices for Vermont's Children

Information gathered from secondary research was compiled into comparative data sets of health indicators to reveal disparities between Washington County and state averages. In certain circumstances, data was only available in the terms of Barre Health Service Area (HSA), which includes all of Washington County and four outlying Orange County towns. As this area falls under CVMC's service area, data reports from the Barre HSA were considered sufficient alternatives to assessing the health of our community in the case that Washington County data was not available. It is noted throughout this report when the Barre HSA is used as replacement to the Washington County definition of our community.

Our Community:

Central Vermont Medical Center primarily serves the region of Washington County, VT with a population of 59,534 people living in 20 towns in over 695 square miles. In addition to Washington County, CVMC's service area includes a few outlying towns in Orange County: Brookfield, Orange, Washington, and Williamstown. For the purpose of this assessment, we have chosen mainly to focus our data collection and analysis on the Washington County population.

Our Service Area



Washington County is Vermont's third most populous county after Chittenden County and Rutland County. Washington County has a population density of 87 persons per square mile, notably higher than the statewide average of 68 persons per square mile. Washington County is comprised of unique towns and cities each with its own history and personality. These towns vary from rural areas with less than 1,000 residents to city centers with as many as 9,052 residents in Barre City.

Central Vermont Medical Center is located in Berlin, just minutes from Vermont’s capital city- Montpelier. The population and urban resources of Washington County are concentrated in Barre, Berlin, Montpelier, Waterbury, Northfield and Waitsfield, all adjoining centers of industry. Employment is dominated by insurance and government agencies in Montpelier, manufacturing and granite-related industries in Barre, health care in Berlin, education in Northfield, and commerce in Warren, Waitsfield, and Fayston. CVMC is one of Vermont’s top 10 service firms and one of Vermont’s top 10 largest employers. Other major employers in Washington County include National Life Group, Washington County Mental Health, Cabot Cooperative Creamery, Green Mountain Coffee Roasters, BlueCross/Blue Shield, and Norwich University.

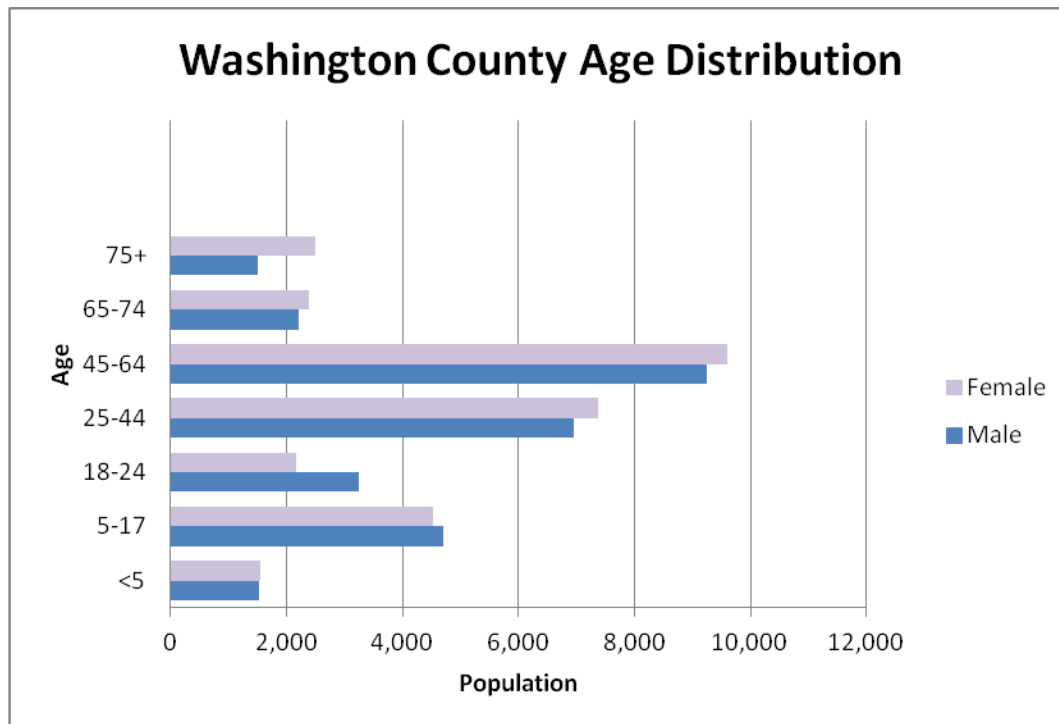
2010 Census Counts

Town Name	Population
Barre City	9052
Barre Town	7924
Berlin	2887
Cabot	1433
Calais	1607
Duxbury	1337
East Montpelier	2576
Fayston	1353
Marshfield	1588
Middlesex	1731
Montpelier	7855
Moretown	1658
Northfield	6207
Plainfield	1243
Roxbury	691
Waitsfield	1719
Warren	1705
Waterbury	5064
Woodbury	906
Worcester	998
Brookfield	1246
Orange	1072
Washington	1039
Williamstown	3389
	66280

Demographic Indicators

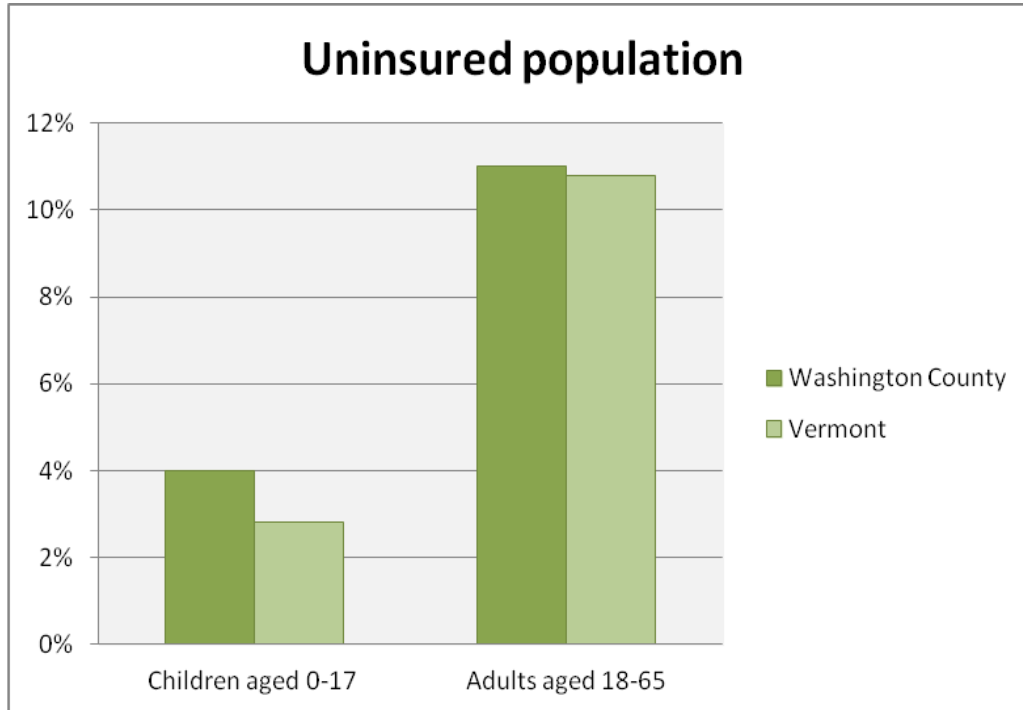
	Washington County	Vermont
Race		
White persons, 2012	96.1%	95.4%
Black persons, 2012	0.9%	1.1%
American Indian/Alaska Native persons, 2012	0.3%	0.4%
Asian alone, 2012	0.9%	1.4%
Persons of Hispanic or Latino Origin, 2012	1.7%	1.6%
Two or More Races, 2012	1.7%	1.7%
Education Attainment, persons age 25+		
High school grad or higher, 2007-2011	93%	91%
Bachelor's degree or higher, 2007-2011	38.2%	33.8%
Income		
Median household income, 2007-2011	\$57,163	\$53,422
Persons below poverty level, 2007-2011	9.3%	11.3%
Unemployment rate, 2011	5.4%	5.6%

Source: U.S. Census Bureau, Washington County and State QuickFacts

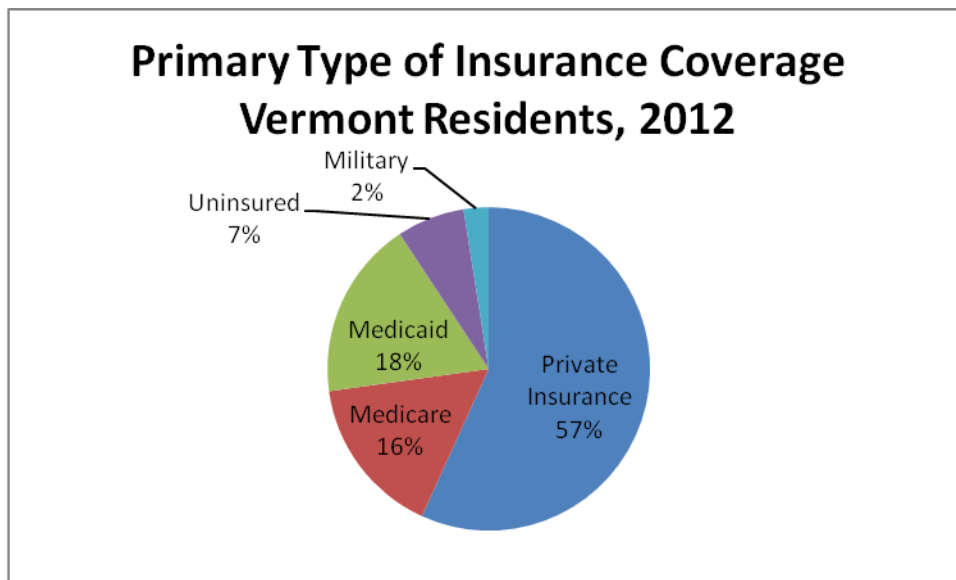


Source: VDH, Vermont Census Counts and Intercensal Estimates, 2010

A key to preventing and managing chronic diseases in a cost-effective way is consistent **access to high quality primary care**. Washington County has a primary care physician supply of 81.5 per 100,000 people. This level is considered an adequate supply by the Vermont Department of Health because it exceeds the level of 78 primary care physicians per 100,000 people. Ninety three percent of people in the Barre HSA have a personal health care provider.



Source: VDHA, Task 7: Study of the Uninsured and Underinsured



Source: Vermont Dept of Financial Regulation, 2012 Household Health Insurance Survey

Priority Health Needs:

Healthy Living

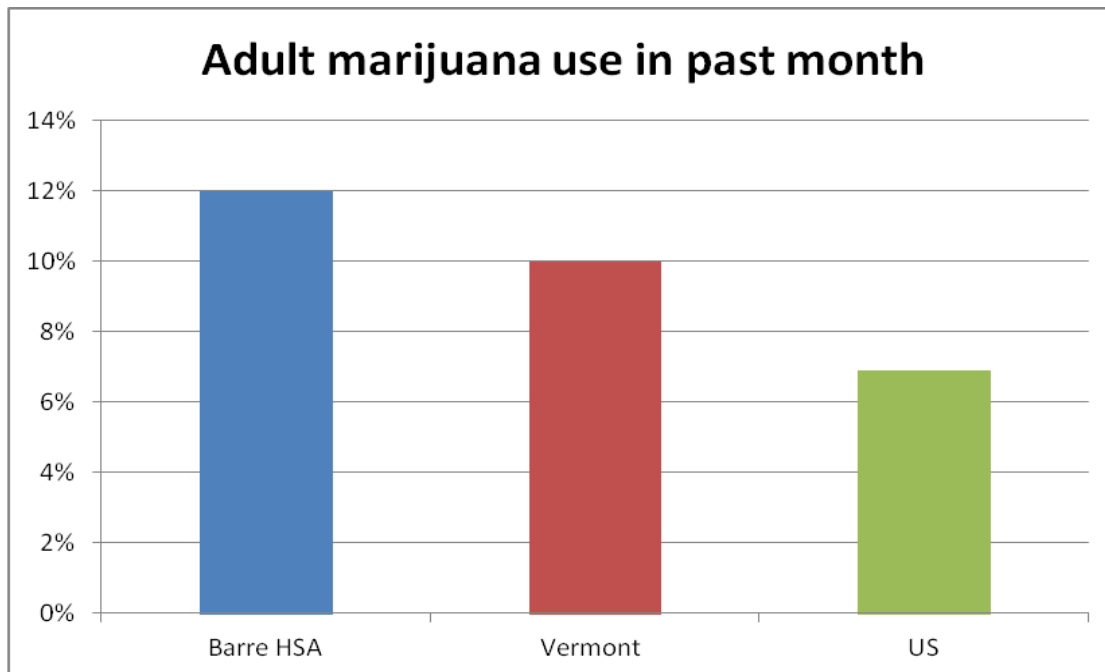
Our assessment has revealed a need for the promotion of healthy lifestyles through:

Elimination of Unhealthy Habits

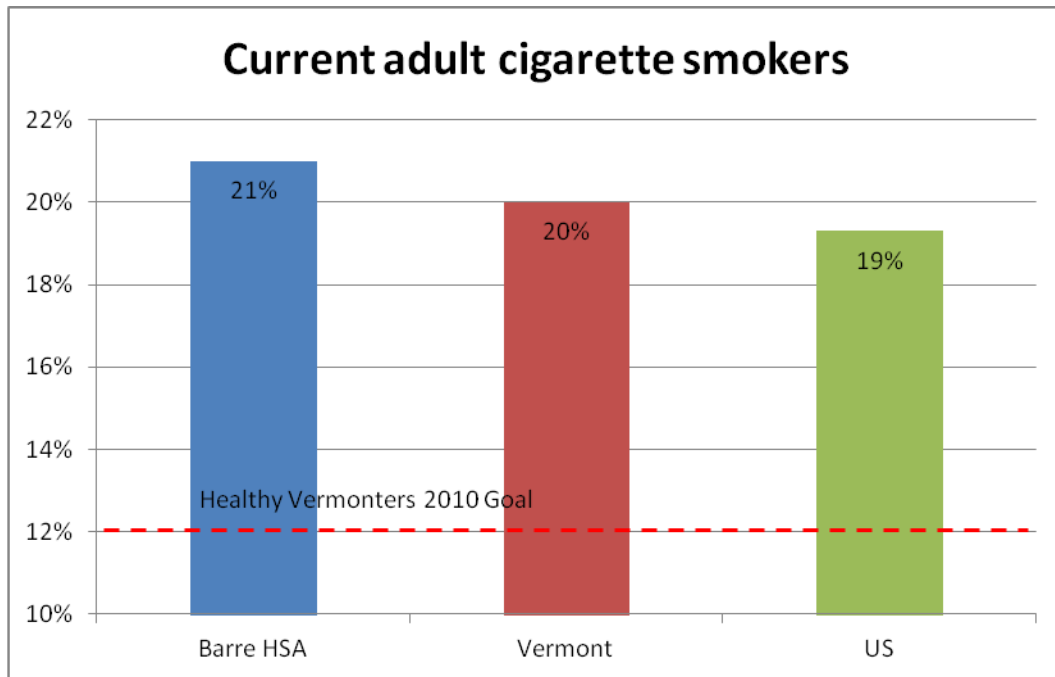
- *Decrease tobacco use by adults and adolescents*
- *Decrease the use of marijuana and other illegal substance (particularly in adolescents)*
- *Reduce the consumption of alcohol by adolescents, especially binge drinking*

Nutritious Diet and Physical Activity

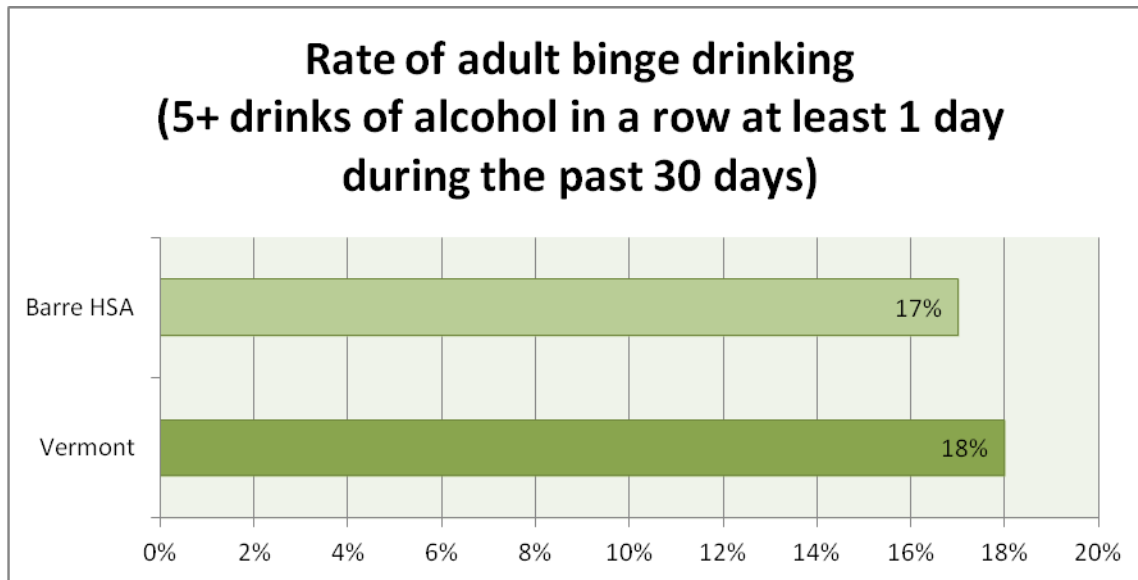
- *Increase the percentage of adults and youth with nutritious diets*
- *Increase the percentage of adults and youth participating in physical activity*
- *Increase use of safe, affordable recreational activities and wellness programs*



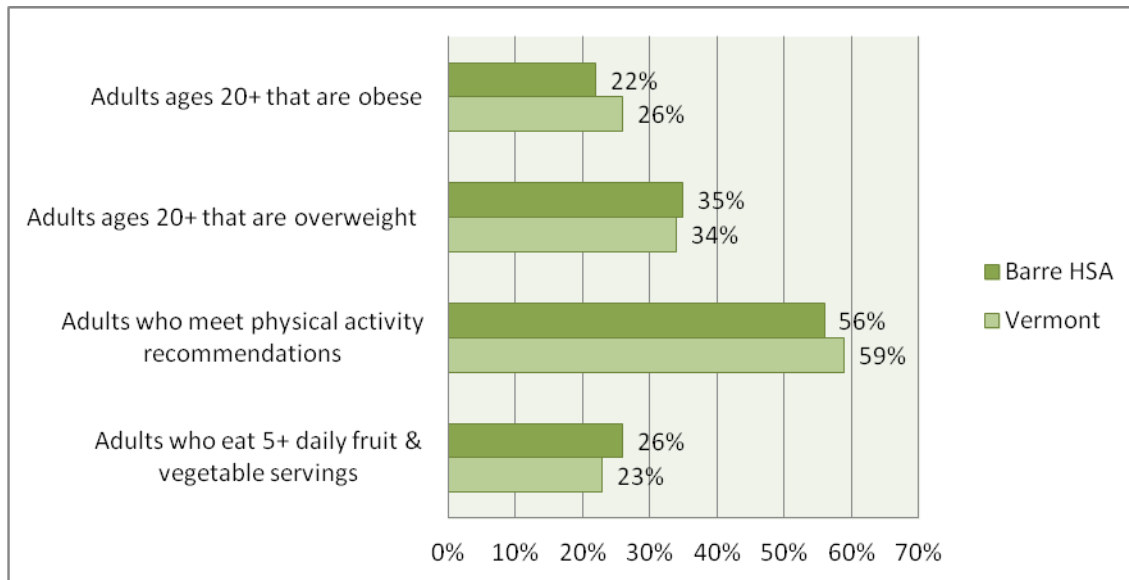
Source: VDH, Barre Health District, 2011 BRFSS Data// CDC, Health, United States, 2012, Table 58



Source: VT Department of Health, Barre Health District, 2011 BRFSS Data// CDC, Vital Signs, 2010

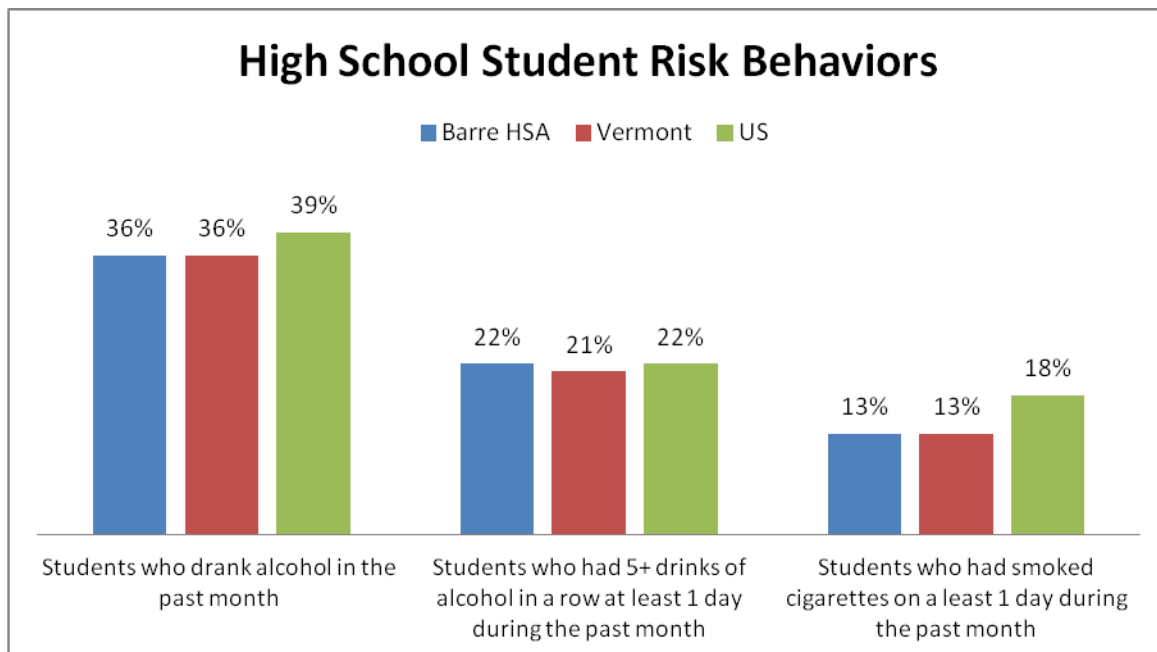


Source: VT Department of Health, Barre Health District, 2011 BRFSS Data

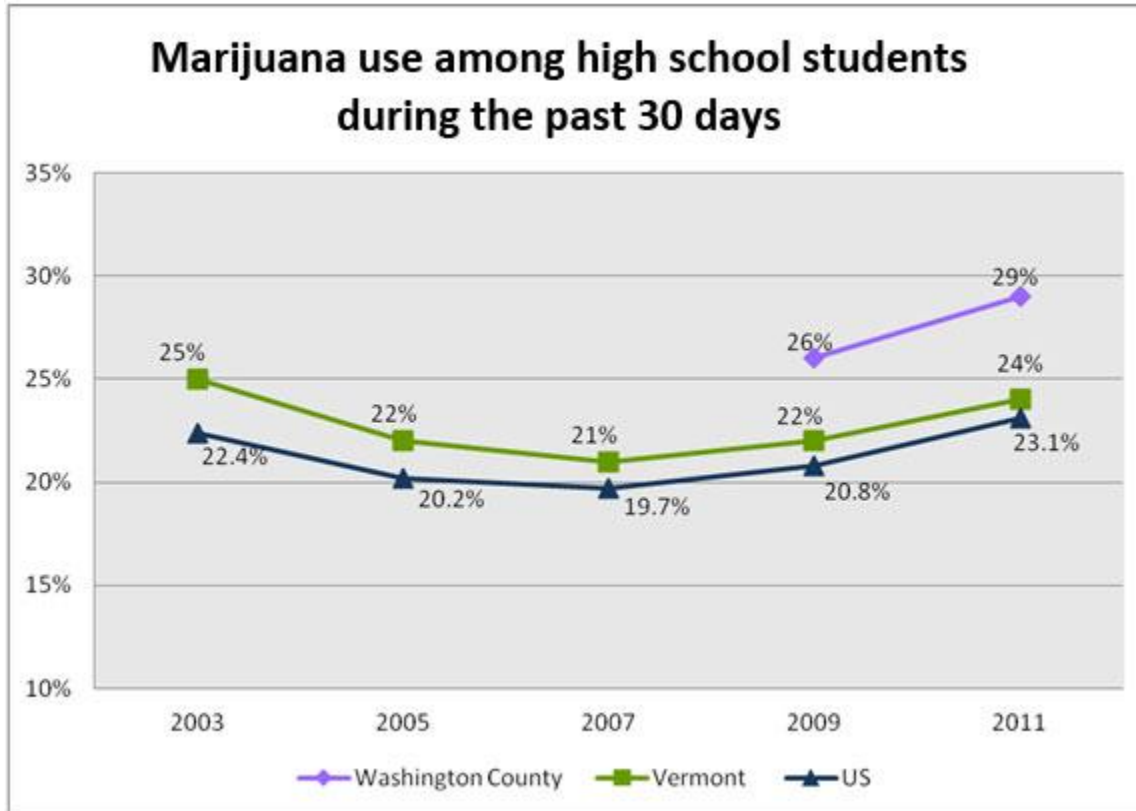


Source: VT Department of Health, Barre Health District, 2011 BRFSS Data

Barre HSA has a higher rate of overweight adults than the Vermont statewide average. Adults in the Barre HSA fall short of the state average in the matter of meeting physical activity recommendations. While adults in this HSA appear to be on par with some indicators of healthy habits, there are clearly areas where improvement can be made: cigarette smoking, marijuana use, and physical activity.



Source: VDH, Vermont YRBS, Washington County, 2011// U.S. Dept of Health and Human Services, CDC, United States YRBS, 2011



Source: VDH, Vermont YRBS, 2011, Washington County// U.S. Dept of Health and Human Services, CDC, United States YRBS, Trends in Prevalence of Marijuana

Only 31% of high school students in Washington County thought people their age greatly risked harming themselves, physically, or in other ways if they smoked marijuana regularly. This is particularly concerning considering the high prevalence of marijuana use in youth. There are numerous programs actively working in Washington County to educate youth and prevent substance abuse. It is important to make note in this report that personal choices made by individuals often have the predominant influence on their health.

Existing community resources

- Central Vermont Substance Abuse Services: Located in Berlin, CVSAS is the designated substance abuse service agency providing alcohol and other drug outpatient and intensive outpatient treatment services for the adults and adolescents of the greater Washington County area.
- People’s Health & Wellness Clinic: Located in Barre, the free clinic provides primary health care and wellness education to uninsured and underinsured residents of the greater central Vermont region.
- BAART Behavioral Health Services: The BAART clinic in Berlin offers Methadone and Suboxone Treatment as a part of their drug addiction rehabilitation and treatment program. In addition to drug addiction treatment, BAART provides mental health and primary care services.

- Washington County Mental Health: A comprehensive community mental health center located on the CVMC campus in Berlin that provides services for adults with mental illnesses, children and adolescents with serious emotional disturbances, and people with developmental disabilities.
- Green Mountain United Way: A non-profit organization working with local groups to encourage communities to plan, support, and learn about strategies that support healthy lifestyles.
- Turning Point Center of Central Vermont: Located in Montpelier, the center offers peer support, sober recreation, and educational opportunities to guide individuals through recovery from alcohol and drug addiction.
- Washington County Youth Service Bureau: The Bureau provides prevention, counseling, and support programming to empower and enrich the youth and families in Washington County.
- Montpelier Integrative Family Health offers two programs centered around establishing healthy habits: *Mindfulness Based Stress Reduction* and *Eat for Life*.
- In several CVMC practices, behavioral counselors are available to assist with, and promote healthy lifestyles.
- The CVMC Community Health Team can be a resource to assessing readiness for change and coordinating follow-up care, counseling, and support for those who wish to seek further assistance.

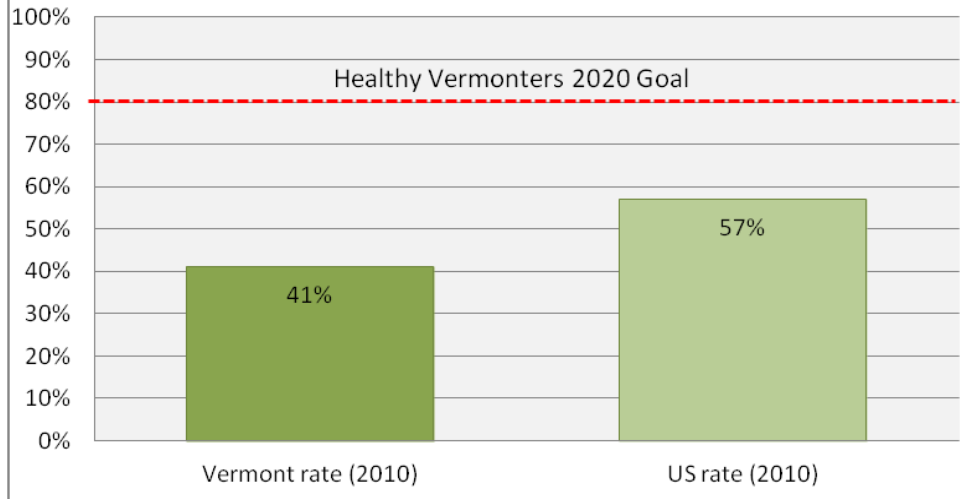
Immunization Rates

The rate of Vermont children who have had all of the recommended and available doses of vaccines is below the national average and the lowest in New England. This issue has received a good amount of attention in the past few years particularly concerning Vermont’s allowance of philosophical and religious exemption to vaccination. Despite the lack of immunization data specific to Washington County, our CVMC Steering Committee agreed that we must continue to pursue higher rates of immunization to improve the statewide public health of Vermont.

- *Increase the percentage of children age 19-35 months who receive a full series of the recommended vaccinations:*
 - DTaP** to prevent Diphtheria, Tetanus, and Pertusis (whooping cough)
 - Polio** to prevent Polio which can cause paralysis and meningitis
 - MMR** protects against Measles, Rubella, and Mumps
 - Hib** to prevent Haemophilus Influenzae b
 - Hep B** to protect against Hepatitis B virus; preventing liver disease
 - + **Varicella vaccine** to prevent chickenpox
 - + **Pneumococcal vaccine** to prevent pneumococcal disease
- *Increase the percentage of children in Kindergarten in Washington County schools who receive a complete series of DTaP, Polio, MMR, Hep B, and Varicella vaccines*
- *Increase the percentage of children entering Kindergarten in Washington County schools who are receiving all recommended vaccinations*

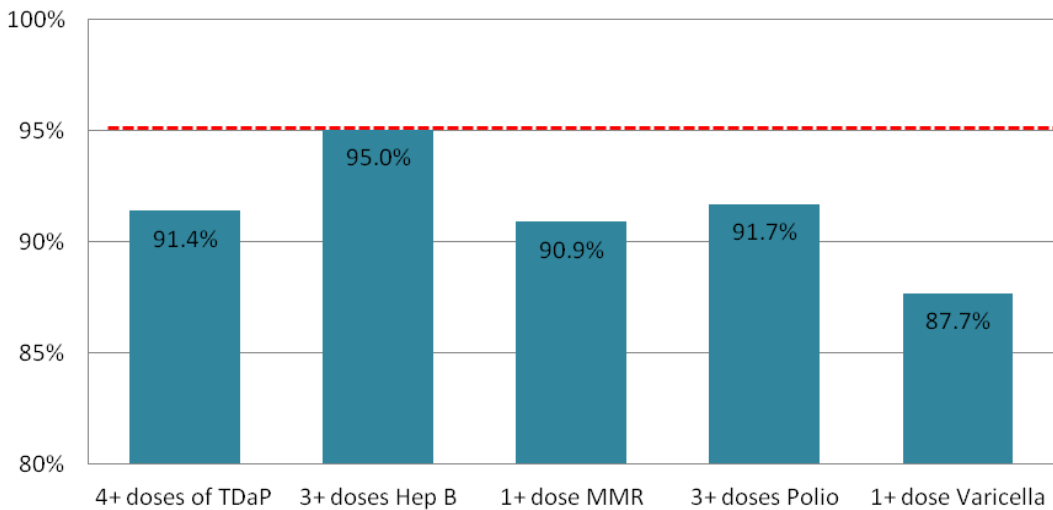
Children age 19-35 months who receive recommended vaccines

4 (DTaP): 3 (Hep B): 1 (MMR): 4(Hib): 3(Polio): 1(Varicella):
4(Pneumococcal)



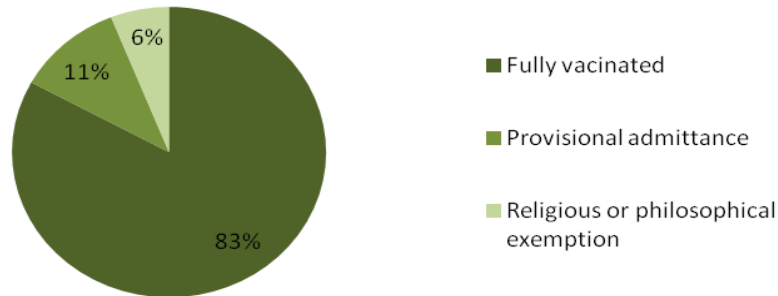
Source: VDH, Healthy Vermonters 2020

Vaccine Coverage for Vermont Kindergarteners 2010-2011



Source: VDH, Statewide Immunization Report Data, 2010-2011

Immunization Status for Vermont Kindergarteners 2010



Source: VDH, Healthy Vermonters 2020

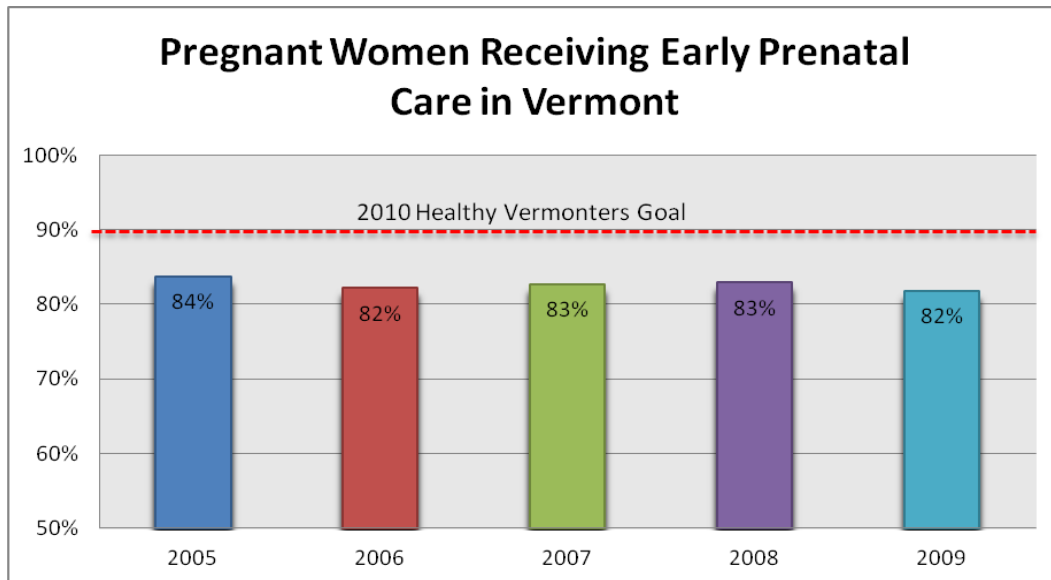
Existing community resources

- A web-based public information campaign, *It's OK to Ask*, was recently launched by the Vermont Department of Health. The website has research-based medical information and video discussions among Vermont moms to inform the public of childhood immunizations.
- The following CVMC Medical Practices offer immunization services
 - Associates in Pediatrics - Barre
 - Associates in Pediatrics - Berlin
 - Waterbury Medical Associates
 - Montpelier Integrative Family Health
 - Mad River Family Practice
 - Central Vermont Primary Care
 - Associates in Family Health
 - Green Mountain Family Practice

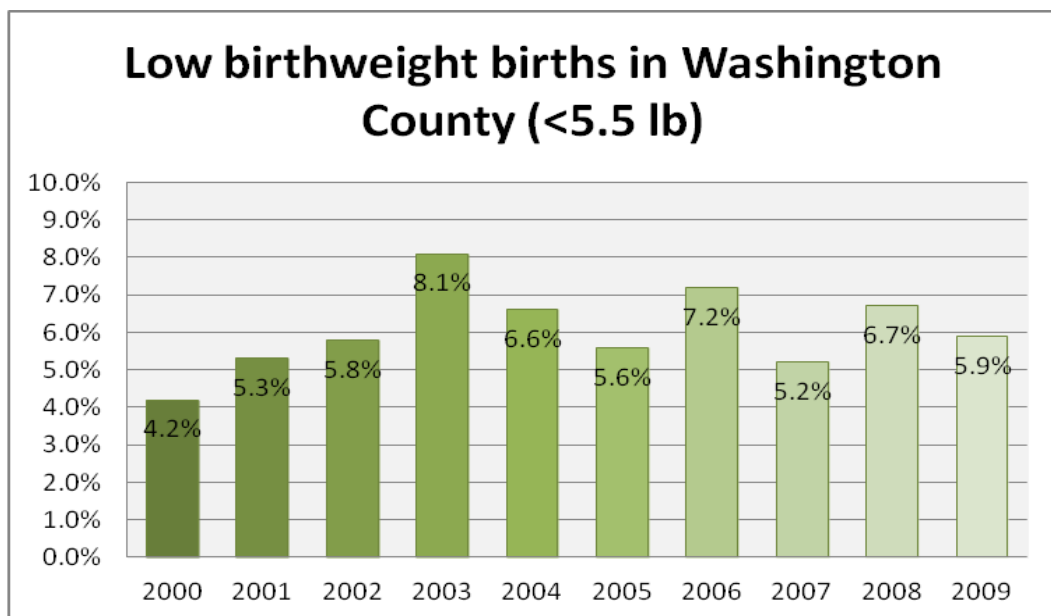
Prenatal and Maternal Care

The following goals were generated to address prenatal and maternal health issues found in our CHNA.

- *Reduce the percentage of low birthweight births (5.5 lb or less)*
- *Reduce death of infants less than one year of age (per 1,000 live births)*
- *Decrease births to mothers ages 15-19 (per 1,000 females of the same age)*
- *Increase the percentage of pregnant women who do not smoke*
- *Increase the percentage of pregnant women who quit smoking during pregnancy*
- *Increase the percentage of pregnant women who receive early prenatal care and counseling (within the first trimester)*



Source: VDH, Vital Statistics, Births



Source: VDH, Vital Statistics, Births

The prevalence of pregnant women receiving early prenatal care from 2005 to 2009 remained relatively stable without significant improvement towards the 2010 Healthy Vermonters Goal. Prenatal care and counseling including recommendations to refrain from alcohol and tobacco use are extremely advantageous for both women and developing babies. The quantitative data reveals that the rate of smoking during pregnancy is *worse* in Washington County than the overall Vermont statewide rate. Ensuring that all pregnant mothers have access to early prenatal care and counseling has the potential to decrease the prevalence of low birth weight babies and infant mortality.

PRENATAL INDICATORS	Washington County	Vermont
% of low birth weight births (<5.5 lb)	5.9	6.1
% of women who did not smoke during pregnancy	83.5	81.3
% of pregnant women who quit smoking	22.3	27.9
% of births that occurred in women aged 15-17	0.8	1.3
% of births that occurred in women aged 18-19	4.4	5.1
% of infant mortality	8.5	5.2

Source: VDH, Vital Statistics, Births, Infant Deaths

Existing community resources

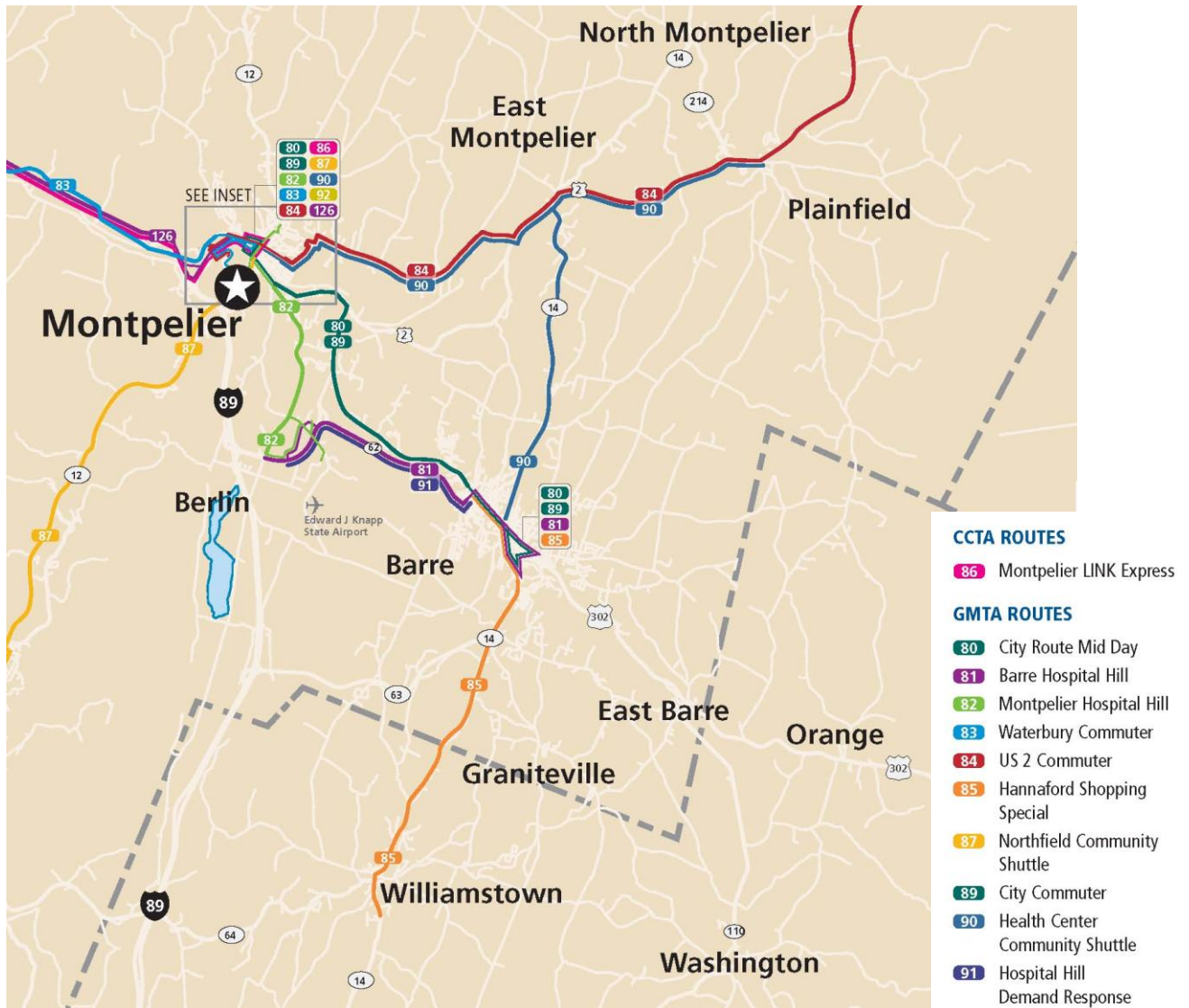
- Central Vermont Home Health & Hospice: Maternal Child Health provides prenatal health care and postpartum home visits to promote health, education, early detection and disease management to expectant mothers, infants and children living in central Vermont
- Care Net Pregnancy Center of Central Vermont: Non-medical facility offering pregnancy, abortion, adoption, and parenting education.
- Vermont WIC: Federal program designed to provide nutritious foods and education to income-eligible pregnant women, women who are breastfeeding or women who have a newborn, infants, or children up to age 5 who are nutritionally or medically at risk.

Transportation

Lack of access to transportation options is a significant barrier to care for many people. Low-income households, zero-vehicle households, people 65 and older, and people with disabilities are populations of particular concern. Health care resources at CVMC and throughout central Vermont will only be effective in treating community health if individuals are comfortable with and easily able to get to and from facilities. The Barre District Office of the Vermont Department of Health also recognized transportation as a significant need in the Barre Health Service Area. CVMC has outlined the following four goals as part of our CHNA.

- *Expand community shuttle demand response service to Barre Hospital Hill for rural communities*
- *Increase health service accessibility for low-income households, zero-vehicle households, persons age 65+, and persons with disabilities*
- *Encourage funding decisions that strengthen public transportation*
- *Ensure that patients have reliable transportation to return home from CVMC*

Green Mountain Transit Authority (GMTA) is the primary provider of public transportation in Washington County. GMTA operates three year-round routes, four commuter routes, two scheduled shuttle routes, and numerous demand-response services. Barre City, Berlin, and Montpelier have full-day service in the Washington County. In 2010, these areas made up 30% of the area's total population with an estimated 19,794 persons, but only made up about 6% of the area's land mass. The population density of these two cities and one town is 387 persons per square mile. Population density outside of GMTA's year-round route service area is much lower, about 59 persons per square mile. The following map illustrates GMTA routes.



Source: GMTA, Transit Development Plan, Market Needs and Analysis

Demand response routes currently service
 -Moretown -Marshfield -Montpelier
 -Barre -Plainfield -Waitsfield

GMTA conducted an onboard passenger survey in June of 2012. When the passengers on the Barre Hospital Hill, City Commuter, City Midday, Montpelier Circulator, Montpelier Hospital Hill, US 2 Commuter, and Waterbury Commuter routes were asked about potential service improvement, they selected the following top six choices (shown in ranked order).

1. More frequency
2. Later hours in PM
3. Routes to more locations
4. Services on Sunday
5. More service on Saturday
6. Faster, more direct service

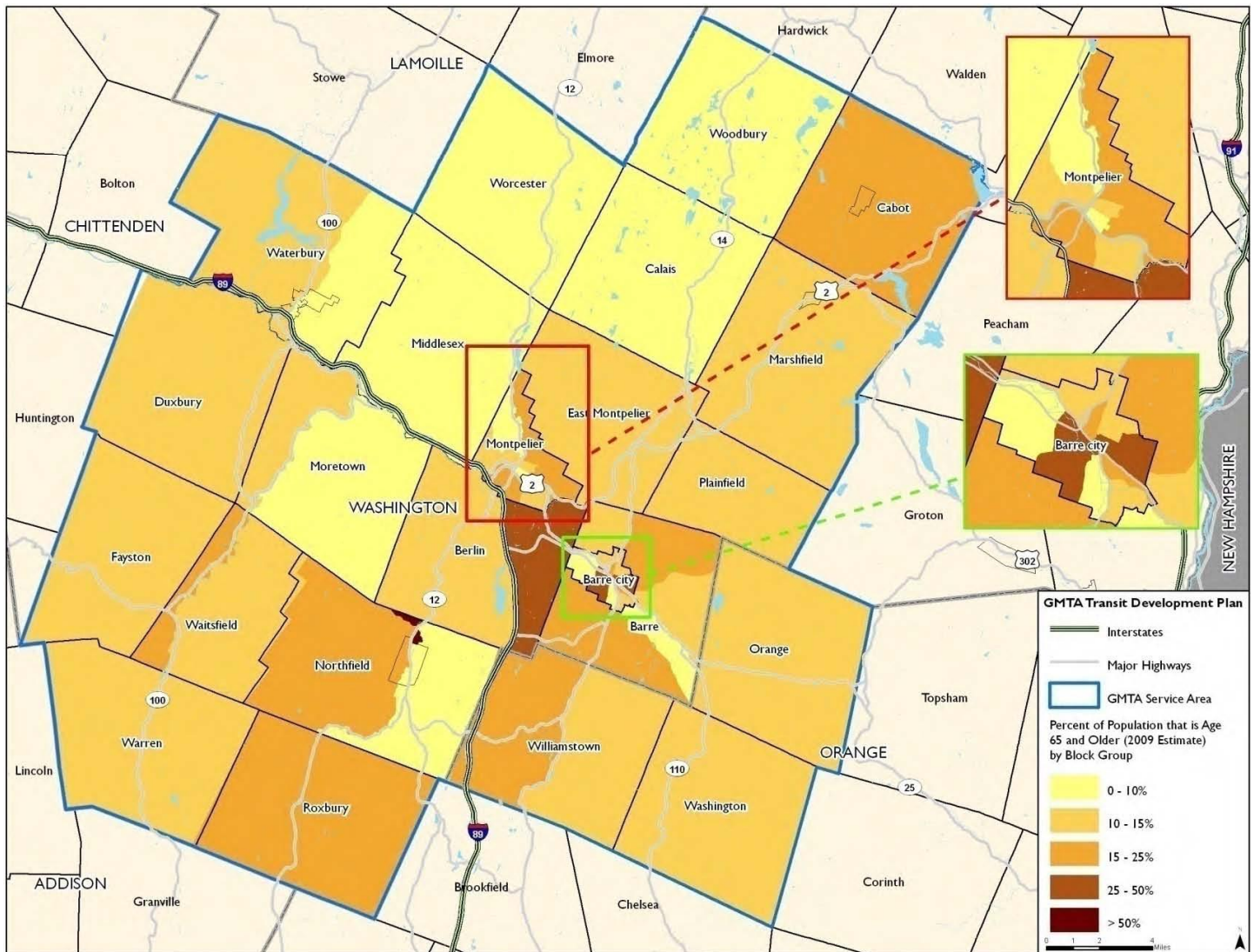
The following communities were cited among the requests for routes to more locations:

Town	Number of Requests
1. South Barre/ Barre Town	2
2. Saturday Burlington service	2
3. Northfield	1
4. Johnson/Hyde Park	1
5. Hardwick	1
6. Wolcott	1
7. Barnet	1
8. Express to St. Johnsbury	1

In 2011, GMTA periodically held Transit Development Plan meetings in Montpelier, Barre, and Morrisville. The following summarizes comments and suggestions for new service received at these meetings:

- Expand Northfield, VT bus service to Monday – Friday, all day service, thereby providing transportation alternatives for commuters, transit dependent, students and healthcare needs.
- Work with local developers and municipalities to conduct “health impact assessments” for newly developed and/or developing areas, to identify transit and walking needs and how they are to be accommodated.
- Demand Response
 - Health provider access too limited by 24 hour notice requirement
 - People sometimes need immediate service to medical facilities
- Bus stop visibility
 - Better identification of, and amenities at, bus stops
 - Benches, lights, schedules, shelters
- Public awareness - additional outreach, marketing, advertising
- Washington County Mental Health in Montpelier has unmet demand for service
- Service to East Montpelier
- Service to Graniteville/Barre Town

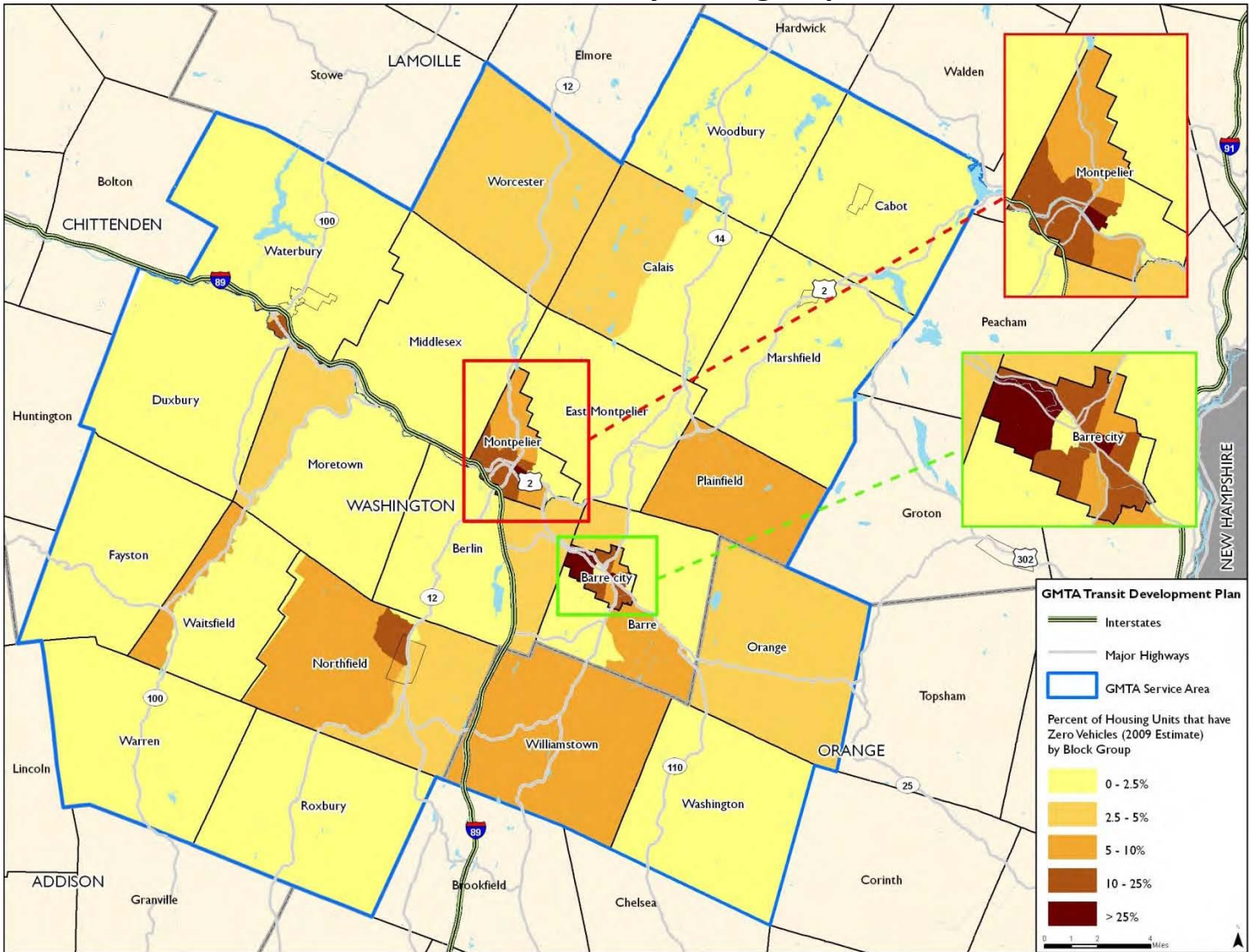
Older Adults – Percent by Blockgroup



Source: GMTA, Transit Development Plan, Market Needs and Analysis

Most of the areas with high percentages of older adults are served by the current regular bus routes (Barre and Berlin) or by community shuttle services (Northfield). Moderate percentages are spread through many towns in central Vermont. Low concentrations of seniors in rural areas run the risk of being overlooked in public transit plans. Demand-response services are the available means of public transportation for these outlying towns.

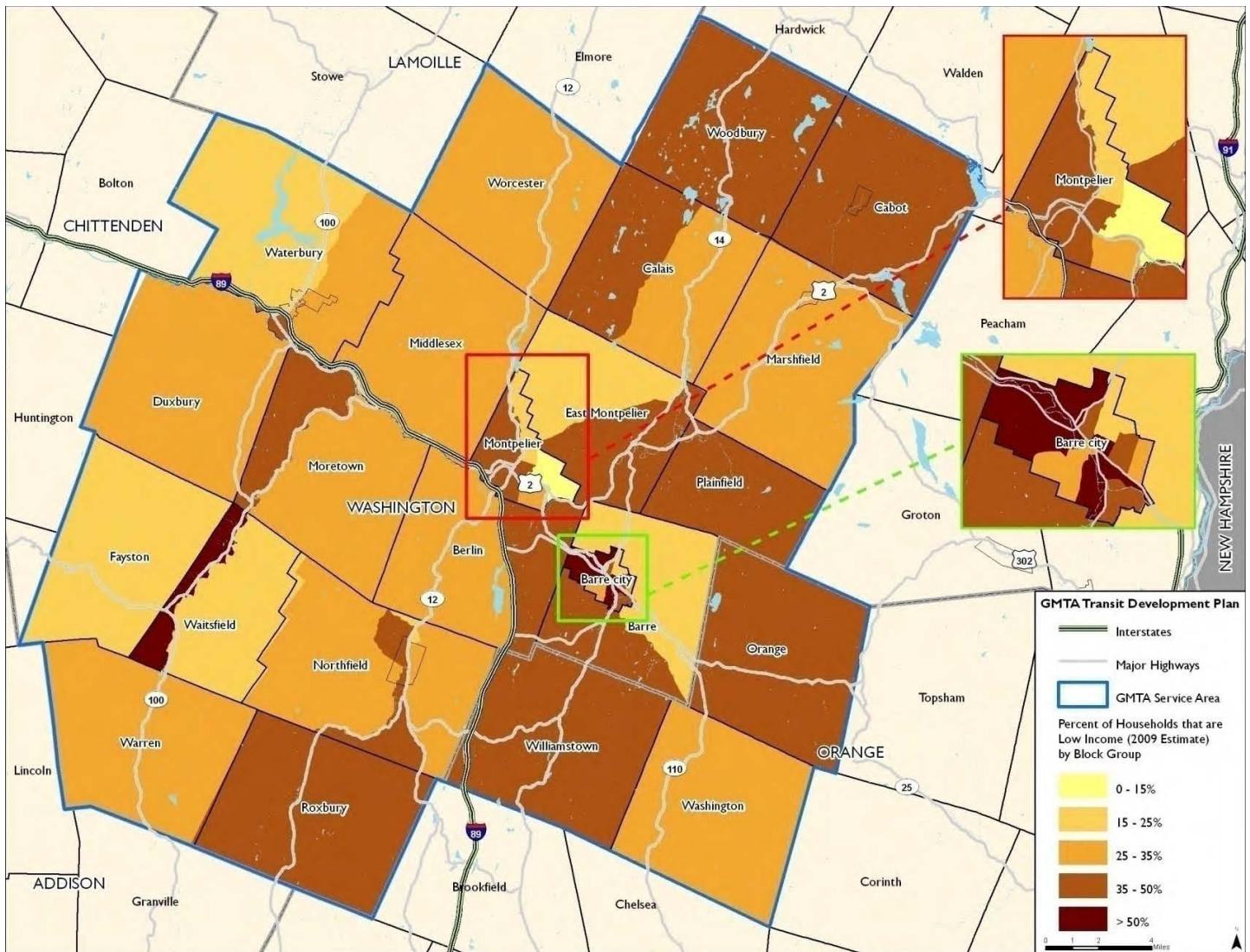
Zero-Vehicles Households- Percent by Blockgroup



Source: GMTA, Transit Development Plan, Market Needs and Analysis

As a whole, central Vermont has five percent of households without access to a vehicle. Montpelier, Barre City, and Northfield are the only areas where more than 10% of households lack an automobile and all three of these areas are located in close proximity to existing public transit and city centers. The remaining towns of Washington County have less than 10% of households with no vehicle. Even so, reliability and timely access are still barriers that households reporting to have a vehicle encounter.

Low-Income Households – Percent by Blockgroup

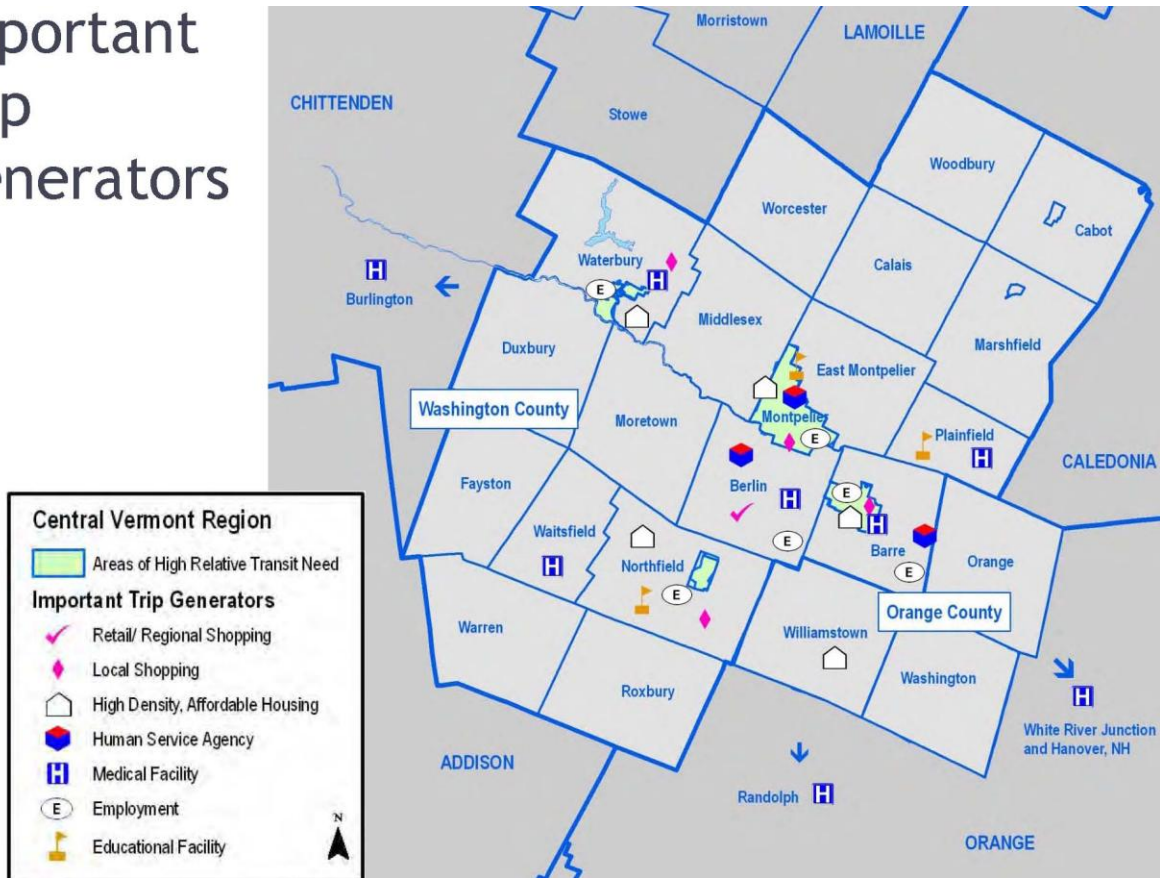


Source: GMTA, Transit Development Plan, Market Needs and Analysis

The highest concentrations of low-income households are located in Barre City, portions of Montpelier, Northfield Falls, eastern Berlin and southeastern Barre Town. The availability of full-day GMTA service in most of these areas provides needed mobility for many families; however, outlying towns such as Cabot, Woodbury, and Roxbury do not have such access.

GMTA identified the town of Northfield as having the most potential for supporting regular transit service in terms of both needy populations and possible employment opportunities. South Barre was also identified through studies and public comment as an area that could support regular local service but currently has none. Other sections of Barre Town also have needs for transit access, but do not have sufficient density for regular local service. Barre town is currently serviced through demand response. Appendix C of this report contains GMTA bus service profiles with more information on span, frequency, and ridership of current routes.

Important Trip Generators



Source: GMTA, Transit Development Plan, Market Needs and Analysis

Existing community resources

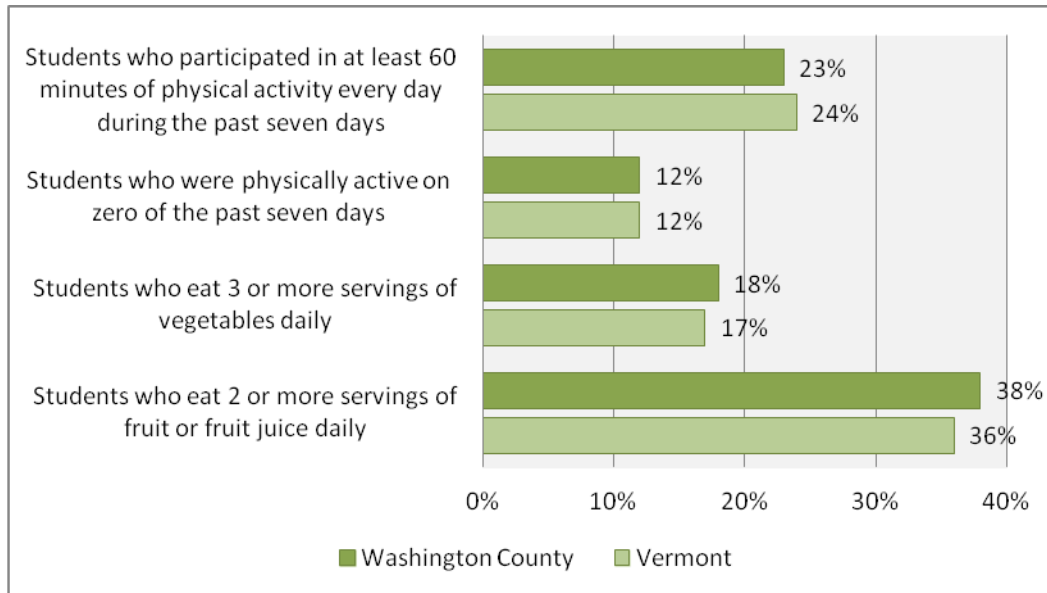
- Medicaid transportation: GMTA provides transportation to necessary medical services for those who qualify for Medicaid transportation coverage.
- Demand response service: GMTA provide service to members of the public who contact GMTA two days in advance of travel date to request a ride from Moretown, Plainfield, Waitsfield, Marshfield, Montpelier, and Barre for transportation to The Health Center in Plainfield, Hospital Hill in Barre, Twin Valley Seniors, and Waitsfield Seniors.
- Central Vermont Council on Aging: This agency works with GMTA to provide accessible and affordable transportation for seniors through the following programs: non-Medicaid medical transportation voucher system, critical care transportation, and meal & shopping service.
- Ticket to Ride: This program pays for the cost of rides for senior citizens and persons with disabilities to medical services, shopping and daily needs.
- Reach-Up Program: In collaboration with the Vermont Department of Families and Children, GMTA offers free transportation service for employment-related activities and childcare.

Youth Obesity

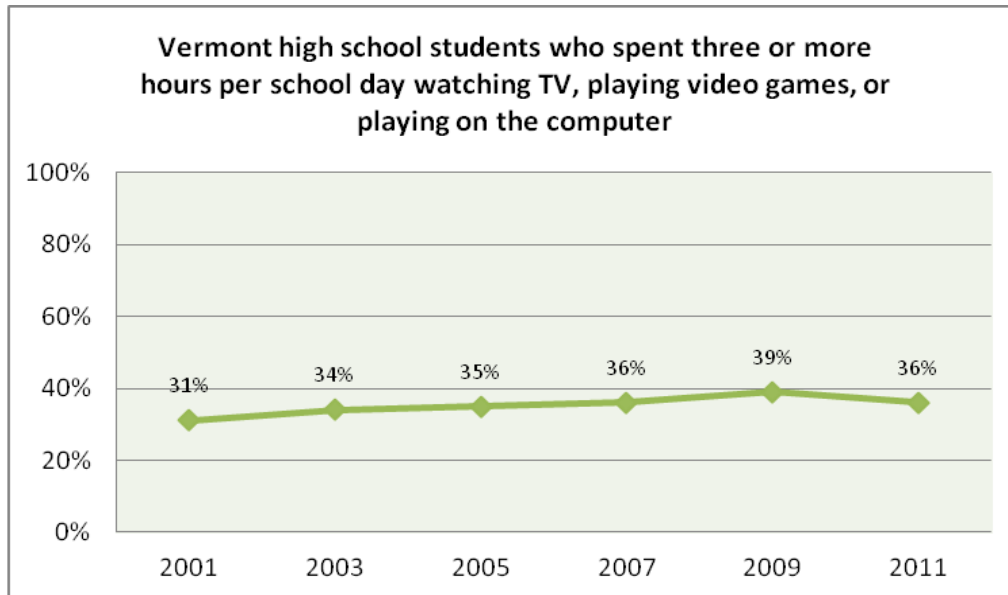
The data presented in this section was used to gauge the causes of youth obesity in Washington County and identify the following recommendations.

- *Decrease the percentage of youth who are overweight and obese*
- *Increase the percentage of youth participating in physical activity*
- *Increase the percentage of youth who consume a healthy diet*
- *Increase youth enrollment in free/reduced school meal programming and other socioeconomic assistance programming*

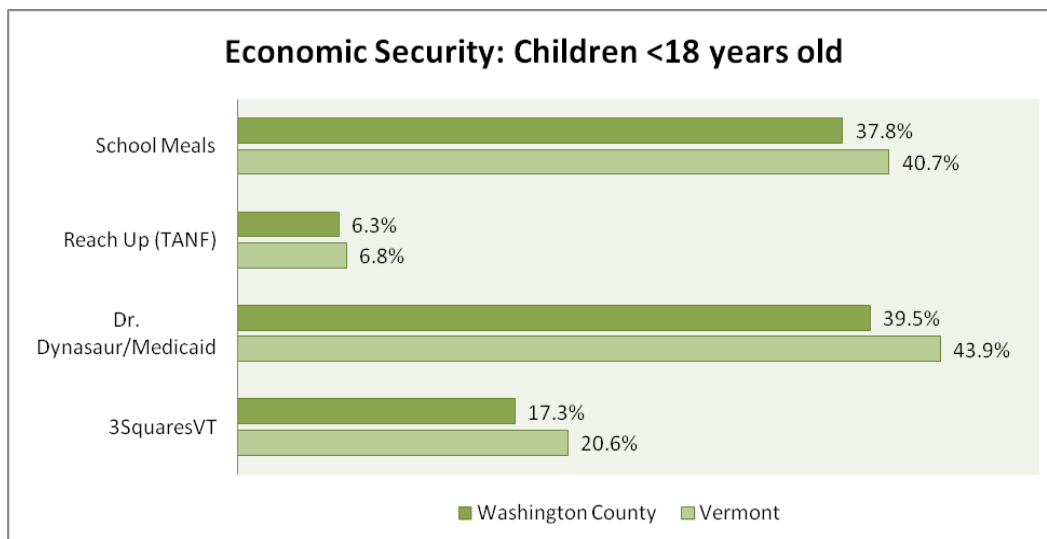
In Washington County, 11% of high school students were obese and 15% were overweight in 2011. These rates are slightly higher than the overall Vermont high school student averages of 10% obesity and 13% overweight. Washington County fails to meet the state standards but has better rates than the national percentage of 13% of high school students who are obese and 15.2% who are overweight. In 2011, the nationwide average of high school students who met physical activity guidelines was 29% and the average rate of Vermont high school students who met the guidelines was 24%. A significant pitfall in this assessment has been the lack of data pertaining to younger and elementary school aged children.



Source: VDH, Vermont YRBS, 2011, Washington County



Source: VDH, Vermont YRBS, Washington County



Source: Voices for Vermont's Children, Vermont KIDS COUNT, Washington County

The amount of Washington County public school students approved for free and reduced price school meals in the 2011/2012 school year increased 43.7% from 2007/2008. The percentage of children who received 3SquaresVT (food stamp) benefits in 2010 was 16% lower than the state rate but a 46.6% increase from 2007 county rate. The percentage of children enrolled in Dr. Dynasaur/Medicaid was less than both the 2010 state rate and 2007 county rate. The extent of enrollment in these preceding assistance programs has the potential to affect the nutritional health of youth in Washington County youth and the health services that are available to them.

Existing community resources:

- Vermont Food Education Every Day (FEED): A collaborative Farm to School program that works with schools and communities to raise awareness about healthy food, good nutrition, and the role of Vermont farmers and farms. The Barre Town Middle and Elementary School participate in a farm to school program that cultivates a link between the classroom, cafeteria, community, and local farms.
- Food Works at Two Rivers Center: A non-profit, farm-based agricultural education and training center in Montpelier that provides subsidized distribution of local food to people throughout the community.
- The U32 School, located in Montpelier, serves the communities of Worcester, Calais, Middlesex, East Montpelier, and Berlin. It has been operating a farm to school program since 2002, purchasing from local sustainable family farms and involving students in school gardens, composting, in-class education, and cooking demonstrations.
- Community Connections: A local nonprofit that runs afterschool programs in Montpelier public schools. After identifying the need to get students more physically active in 2006, Community Connections has coordinated the Safe Routes to School program in Montpelier with events to encourage students to walk or bike to school.

Implementation Plan

The following implementation plan outlines the logistics and remedies concerning the priority areas agreed upon by the CVMC Steering Committee.

Healthy Living, Immunization Rates, Prenatal/Maternal Care, Transportation, & Youth Obesity

At Central Vermont Medical Center, we collaborate with other non-profits, businesses, community leaders, and governmental agencies to provide a variety of programs and educational offerings intended to improve the health of the communities we serve. Our affiliation beginning in 2011 with Fletcher Allen Health Care, Champlain Valley Physicians Hospital Medical Center, and Elizabethtown Community Hospital under Fletcher Allen Partners has increased our reach and capabilities as the primary medical center in central Vermont. This connection with Fletcher Allen has been a significant step in promoting regional strategic planning, improving access to local care, enhancing information technology, and encouraging joint quality and clinical initiatives. Together our organizations have worked to align with the state and federal health care reform agendas that promote enhanced integration and build upon our existing clinical partnerships.

A number of CVMC staff members serve on boards of other mission related community organizations and planning groups such as the Vermont Blueprint for Health, Central Vermont Health Care Coalition, Central Vermont Substance Abuse Services, Green Mountain United Way, People's Health & Wellness Clinic, Vermont Dietetic Association, Vermont Ethics Network, Vermont Medical

Society Board, and many more. This implementation plan points to and acknowledges the valuable work of many efforts already underway throughout the county to address community health.

Our Steering Committee discussed regional strategies that are working, gaps that remain, and opportunities for improvement. From this point, we have developed the following measures to address those areas for improvement that require more attention and collaboration.

Healthy Lifestyles

- *Why address it?* Alcohol abuse, tobacco use, and marijuana use are barriers to improving the overall health of the CVMC community. In attending to these issues, CVMC will potentially decrease the number of chronic diseases developed down the road. CVMC is working with community partners including the Vermont Department of Health, local schools and area recreation departments to make it easier for people to make healthy choices and eliminate unhealthy habits. It is important that community members have knowledge of the resources that are currently available to them.

- Implementation steps

Continue current initiatives

- Tobacco Cessation Classes: Free 4-week sessions offered monthly at CVMC with special attention given to developing a quitting strategy, including dealing with weight control and managing stress. CVMC will continue to promote the start of a tobacco-free lifestyle by widely publicizing the workshop throughout the medical center and community.
- Promote Healthy Lifestyles: Make community members aware of various types of exercises and places they can go to exercise, i.e. CVMC walking trail, parks, fitness classes, etc. Sponsor community activities that encourage physical fitness and exercise for families.
- Health Care Share: In partnership with Vermont Youth Conservation Corps, CVMC provides freshly harvested, organic vegetables to families in need for 12 weeks. An educational newsletter with information on ways to prepare the vegetables is distributed along with the produce each week.
- Continue CVMC's wellness initiative for employees. This program helps to build awareness and accountability for personal health via consistent medical and dental preventative care, and continuous assessment of health risks.
- The addition of panel coordinators to our Primary Care Physician and National Committee for Quality Assurance certified practice locations will exponentially increase wellness and prevention efforts. This will be achieved through improved identification of patients who missed or are overdue for appointments, pre-visit planning (ensuring patient referrals, scheduled lab/diagnostic tests are acted upon and/or routine screening are identified in advance for the provider to have discussions with patient about) and overall coordination of care.

Advance action

- Engage practitioners: Informing adolescents on the dangers of alcohol and drug abuse to prevent habits from forming and developmental damage from taking place. Increase practitioner recommendation and referral for continued care of mental health and substance abuse issues.
- Through promotion on hospital bulletins and media center, ensure that the public is aware of organizations such as Central Vermont Substance Abuse Services, and tools such as alcoholscreening.org made available through website links by the Vermont Department of Health.

Increase Immunization Rates

- *Why address it?* Vaccines are one of today's most successful and cost-effective public health tools for preventing disease and death. Increasing immunization coverage will improve community healthy by preventing and reducing the spread of serious disease in children and adults. Several CVMC practices have been recognized by the State of Vermont for their work on ensuring that both adults and children receive recommended vaccines. However, Vermont has one of the highest rates in the country of children who are not vaccinated according to the schedule recommended by the Centers for Disease Control and Prevention. The percentage of 19-35 month old children who receive recommended vaccines (41%) is notably lower than the nationwide average (57%). CVMC is obliged to promote and educate our community on the benefits of vaccination.

- Implementation steps:

Continue current initiatives

- Associates in Pediatrics in Barre and Berlin and other CVMC practices to continue to reach out and send reminders to families who have missed or are overdue for vaccination appointments. Practices will focus on listening to the concerns and questions of parents and responding to help them understand that vaccination improves the health of everyone in the community.
- Continue efforts with the Vermont Department of Health to increase completeness of reporting into the Vermont Immunization Registry.
- Communication with Washington school system concerning enrolled students vaccination statuses
- Associates in Pediatrics in Barre and Berlin have added "well child check" reminders to parents who have missed or are overdue for pediatric appointments.

Advance action

- CVMC plans to provide a link to the web-based public information campaign, *It's OK to Ask*, recently launched by the Vermont Department of Health. The website has research-based medical information and video discussions among Vermont moms to educate the public about childhood immunizations.
- Include information on vaccines and their recommended schedules for newborns into the curriculum of CVMC's Childbirth and Prenatal Education classes. As Vermont allows exemption from vaccines due to philosophical and religious reasoning, it is especially important for CVMC staff to inform parents and guardians of the risks of not vaccinating children.

Prenatal and Maternal Health

- *Why address it?* Low birth weight babies born weighing less than 5.5 pounds are at a higher risk of preterm birth after less than 37 weeks of pregnancy, infant mortality, cognitive and developmental delays, respiratory conditions, and long-term health complications. Considering that smoking is the most preventable cause of low birth weight in babies, this is a definite area to be addressed. In previous years, Washington County had higher rates of low weight infants born than the statewide average. Our community has improved from this point and now the rate of low birth weight babies in Washington County is 16.4% lower than the Vermont statewide average. CVMC plans to continue on this path of improvement and increase the percentage of mothers who do not smoke during pregnancy (85.1%) to the Healthy Vermonters 2020 Goal (90%). The following implementation steps focus on preventing risk behaviors in pregnant women and increasing early prenatal care and counseling.

- Implementation steps:

Continue current initiatives

- Encourage women to take part in Centering Pregnancy®: Monthly group meetings offered at Central Vermont Women's Health. Physical and emotional issues important to expectant mothers are discussed, along with good health guidelines including diet, stress management, exercise, dangers of risk behaviors, and smoking cessation.
- Childbirth Education Classes: On-going sessions of prenatal education and birthing classes offered at CVMC. Pregnant women are informed of the risks involved with tobacco, alcohol, and substance abuse.
- Prenatal Yoga: Classes held weekly at CVMC to ease the discomforts of pregnancy and prepare women physically and emotionally for birth. This programming at CVMC provides opportunity for pregnant women to engage in healthy behavior and relaxation.

Advance action

- Encourage utilization of and enrollment in Medicaid and Dr. Dynasaur program so that pregnant women have access to hospital services, health education, nutritious foods, nutritional counseling, breastfeeding support, and connections to other community resources. CVMC staff are aware of these programs and will inform patients of these programs when a need is identified.
- Practitioners actively motivate pregnant women to quit smoking and take part in CVMC cessation classes or participate in statewide Vermont Quit Network program.

Transportation

- *Why address it?* More than 90% of Washington County's land mass does not receive regular public transit service. CVMC believes we must be especially aware of low-income households, zero-vehicle households, adults 65 and older, and persons with disabilities in these areas. It is important that all people have the opportunity to utilize the resources at CVMC and other health care organizations in central Vermont. This is only possible if individuals and families feel comfortable and are easily able to get to and from these facilities.

- Implementation steps:

Continue current initiatives

- In December 2012, CVMC donated \$10,000 to GMTA to support shuttle routes. As GMTA is the primary public transit provider and Medicaid broker for all of Washington County (including the three towns in Orange County), this money will ultimately work to ensure those who do not have their own transportation have access to healthcare facilities.
- In 2012, our Service Recovery Budget was \$3,000. This fund provides patients in need with bus tokens, gas cards, and meal cards at CVMC. We take responsibility to ensure that patients with no means of transportation are able to return home safely.

Advance action

- Increase dispersion and frequency of media promotion throughout the CVMC campus to inform the public of GMTA transportation assistance programs. Discuss such promotion with other health care facilities on Barre Hospital Hill so that regular routes, as well as demand services are presented throughout the community.
- Fortify communication with seniors, persons with disabilities, pregnant women/single mothers, and low-income advocacy groups to prevent major pitfalls in access to CVMC.
- Identify populations that continue to struggle with current service (route location, frequency, and affordability) through survey conducted by CVMC.

Youth Obesity

- *Why address it?* CVMC must continue to fight the epidemic of youth obesity to prevent development of chronic disease in the future. Over the past several decades, major societal changes have affected the nutritional habits and physical activity of the youth of Vermont. Washington County's youth obesity rates are below the national average but these levels are still too high. Our review of community data revealed physical activity and healthy diet with fruits and vegetables to be areas where our community can still improve. CVMC believes every effort put into assuring healthy lifestyles our youth will be repaid many times over in their health and success down the road in life. We resolve to work within central Vermont to increase access to healthy foods and nutritional education as well as encourage active lifestyles in the community.

- Implementation steps:

Continue current initiatives

- Promote and advertise *Healthy Living for Kids*: CVMC programming offered as a fun way for families with children who struggle with weight issues to learn about healthy food choices and lifestyle changes. Each session includes private one-on-one time with a nurse practitioner and dietician. Meetings are held at CVMC medical practices throughout the year based on age and gender.
- Increase the frequency of youth events like *Food & Nutrition Story Time-Stone Soup*: A fun and educational story hour for children and their care providers to learn about nutritious ingredients with a CVMC Registered Dietitian and enjoy vegetable soup prepared by CVMC chefs.
- Registered Dietitians at CVMC Medical Group Practice locations will continue to work aggressively with patient referrals to address childhood obesity through diet and play.

Advance action

- Work with community groups to promote and ensure youth access to local parks, recreation spaces, and fitness events. Advertise outside programming throughout CVMC to endorse physical activity.
- Increase participation in free and reduced school meal program. All school-aged children should have access to healthy food choices and daily physical activity during the school day.
- Work with Associates in Pediatrics to focus on office visit goals for all children and adolescents:
 - Assess dietary and physical activity behaviors
 - Calculate and plot BMI once a year
 - Counsel families to help maintain or achieve healthy weight
 - Counsel families to develop healthy nutrition and physical activity behaviors

Needs Identified in the CHNA not Included in this Implementation Plan

Mental health is an issue that was identified in this assessment as an area of need but was not prioritized or included in our implementation plan. When Washington County youth were surveyed through the 2011 Youth Risk Behavior Survey, 23% of students reported that they felt sad or hopeless almost every day for two weeks or more in the past 12 months. Even more troubling is the statistic that 11% of Washington County students reported having made a suicide plan in the past 12 months. With this evidence and more, we recognized community mental health as an area where improvement is certainly necessary but as an area more suited for collaborative community and state efforts, where CVMC does not intend to implement independent immediate action. Current available sources of care are Washington County Mental Health Service, CVMC Family Psychiatry Associates, CVMC's Inpatient Psychiatry Department, and The Health Center in Plainfield.

A significant reason why implementation steps for mental health are not included in this report is that a new 25-bed intensive-care psychiatric hospital is under construction adjacent to CVMC in Berlin. This \$28.5 million facility will be part of a statewide network of mental health facilities to replace the Vermont State Hospital in Waterbury and is projected to be open to patients by January 2014. Mental health has been acknowledged as a pressing issue statewide. Our community hopes this new facility will alleviate the current demand for inpatient care for severe mental health need.

As expected, our Community Health Needs Assessment identified additional determinants of health that fall outside the realm of our capabilities at CVMC. A prominent need that we are not directly addressing is Oral Health. Several of our physicians have undergone fluoride treatment training, and will be able to provide this service for children up to four years of age who do not have access to dental care. However, one out of four adults in Washington County has not visited a dentist in the last year. As a medical hospital, we do not have the facilities or expertise to address this need directly. With this said, it is important that we recognize all factors that may be affecting the overall health of patients walking through our doors at CVMC. We intend to continue collaboration with community facilities such as The Health Center in Plainfield that offer dental care.

Evaluation of Implementation Impact

In concluding this assessment, an essential final phase will be our future evaluation of the impacts made by our implementation measures. The following statements outline the methods that we will use to assess the health impacts of the policies, plans, and projects of our implementation plan.

Healthy Lifestyles

- Monitor enrollment numbers in Tobacco Cessation classes
- Conduct end of season survey for families who participated in CVMC Health Care Share program
- Assess adult rates of cigarette smoking, marijuana use, binge drinking, healthy habits, and obesity in Washington County/Barre HSA via VDH data
- Assess Washington County YRBSS data for the prevalence of alcohol and drug use. Also assess the rate of students who report to be aware of the harm/risk drug and alcohol abuse involves

Increase Immunization

- Assess Washington County/Barre HSA vaccination rates for completed recommended series as well as individual vaccines via VDH data
- Evaluate rate of philosophical and religious exemption
- Communication with VDH, Washington County schools, and CVMC practices (particularly pediatrics and family medicine) to monitor that Washington County is on par with state and national goals

Prenatal and Maternal

- Monitor enrollment numbers in Centering Pregnancy®, Childbirth Education, and Prenatal Yoga classes
- Evaluate Medicaid coverage of pregnant women in Washington County. Compare to enrollment in prenatal health services
- Assess Patient Record and Information Systems Management (PRISM) data when it becomes available, to identify the number of pregnant women who are advised to quit smoking and cease unhealthy habits

Transportation

- Continue assessment of ridership and route productivity of GMTA public transit services
- Review CVMC data for an increase in Emergency Department patient numbers with an increase in transportation voucher/aid utilization

Youth Obesity

- Monitor enrollment numbers in Healthy Living for Kids program
- Assess yearly enrollment numbers of students in free and reduced price school meal programs in Washington County schools
- Assess the rates of youth obesity, healthy diets, and physical activity in Washington County/Barre HSA via VDH data

Report Dissemination

Upon completion, this Community Health Needs Assessment report will be reviewed and approved by the CVMC Board of Trustees. Our CHNA will then be made available to the public through publication on our medical center website, www.cvmc.org, and through distribution to the Green Mountain Care Board and the Vermont Department of Health. CVMC fully believes that one of the most powerful results of this assessment will be the opportunity for our community to review and respond to the material included in this report. You may contact us at, www.cvmc.org/contact-us to request a hard copy of this report, or share any questions, comments, or concerns.

Appendix A Health Indicators

Disease Prevalence

	Barre		Vermont
	Estimated Adults	%	%
Arthritis, Ever Diagnosed	12,000	26%	27%
Arthritis Limits Usual Activities	6,000	63%	51%
Arthritis Limits Type of Work	3,000	27%	32%
Asthma, Current Diagnosis	4,000	9%	11%
Cancer Diagnosis, Ever			
Skin Cancer	3,000	6%	6%
Non-Skin Cancer	4,000	8%	7%
High Cholesterol, Ever Diagnosed	15,000	33%	30%
Chronic Obstructive Pulmonary Disease, Ever Diagnosed	2,000	4%	5%
Cardiovascular Disease, Ever Diagnosed	4,000	9%	8%
Depressive Disorder, Ever Diagnosed	10,000	23%	23%
Diabetes, Ever Diagnosed	4,000	8%	8%
Hypertension, Even Diagnosed	15,000	30%	27%

Source: VT Department of Health, Barre Health District, 2011 BRFSS Data

5 Leading Causes of Death

Indicator	Washington County 2009	Vermont
Malignant Neoplasms (cancer)	122	1252
Cardiovascular Diseases	138	1490
Chronic Lower Respiratory Diseases	37	363
Accidents	34	306
Alzheimer's Disease	19	190

Source: VT Department of Health, Vital Statistics, 2000 VT Resident Deaths

Appendix B Steering Committee Discussion Guide

Community Assessment Focus Groups' Discussion Guide

I. Welcome

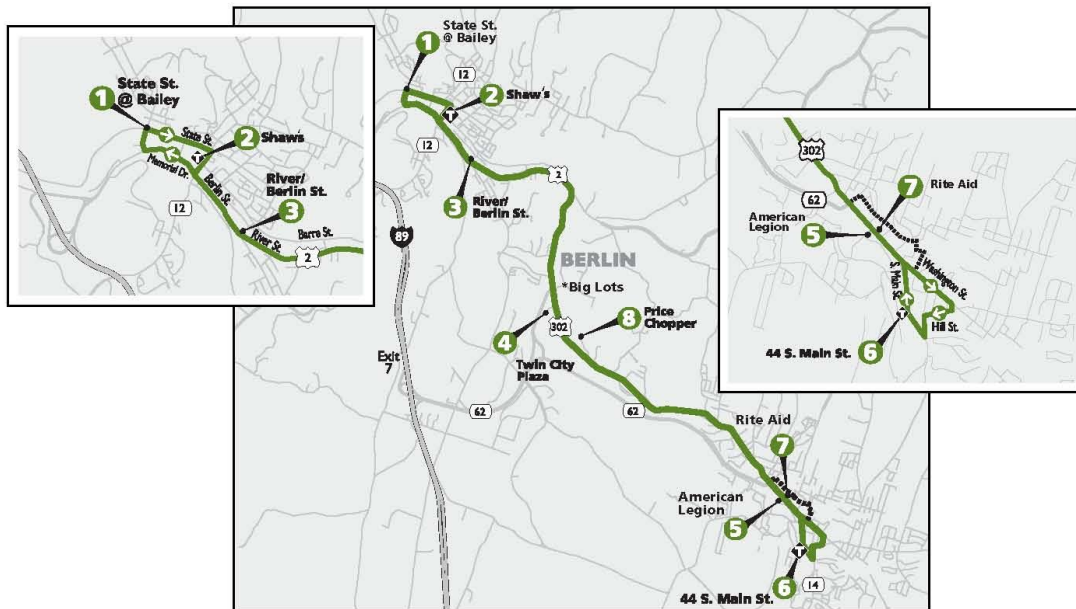
II. Topics

1. What are some of the most important aspects of your community?
2. What is your vision of a healthy community? By community, I mean the place where you live, work, worship or play.
 - a. What is healthy about your community?
 - b. Are there any unhealthy aspects in your community? What/why?
3. What are some of the healthcare needs you see in your community?
4. What is the most important health related issue in your community? Why?
5. What is the most critical risky behavior in your community? Why?
6. How easy or hard is it for you or other family members to access needed medical services?
 - (a) Emergency services?.
 - (b) Preventive services? Why?
7. What are your thoughts about the local health related community services? (Services not including going to the doctor or hospital)
 - a. Which services are adequate? Which ones are not?
 - b. Do you have information about these services? Is it adequate? Why/why not?
8. Do you have access to these community services? If no, why not?
9. Are there gaps in the need for services and the availability of services? If yes, where are the gaps?
10. What can be done in your community to improve the health and quality of life for people such as yourselves? Are there recommendations or suggestions you would like to make to improve the health of your community?

Appendix C GMTA Bus Service Profiles

ROUTE PROFILE: 80 City Route Midday

Function: The City Midday operates between Montpelier and Barre, and offers deviations up to .75 mi off the fixed route by request.



Span: Weekdays 9:25 a.m. to 3:40 p.m.
Saturdays 9:25 a.m. to 3:40 p.m.
No service on Sundays

Frequency: 75-minute headway at all times

Ridership: FY12 Daily Average – 122

Productivity: Boardings per revenue hour – 19.3

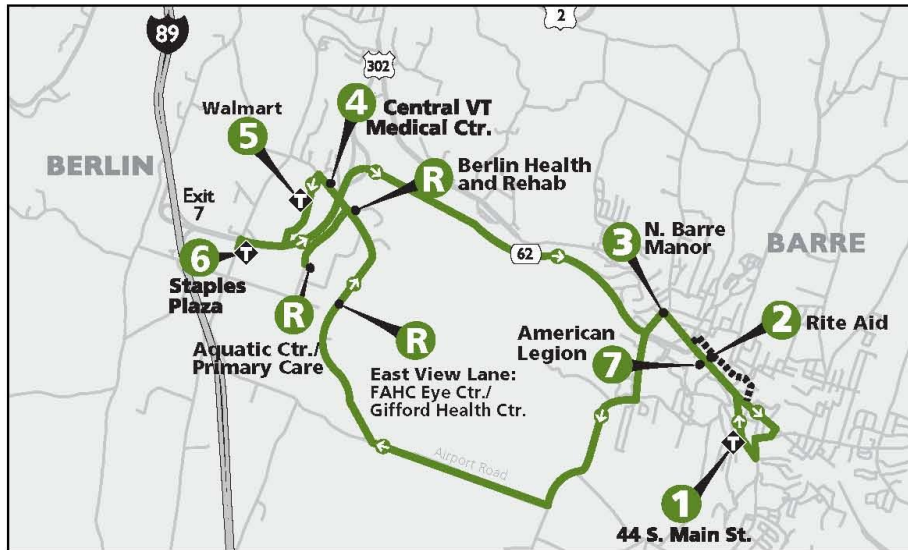
Top Stops: Main St. @ Shaw's (29 boardings)
Summer @ Seminary (12 boardings)
N. Main St. @ N. Barre Manor (10 boardings)
S. Main St. @ Tilden House (9 boardings)

Revenue: \$11,485

Gross Cost: \$117,568

Net Cost per Passenger: \$2.84

ROUTE PROFILE: 81 Barre Hospital Hill



Function: The Barre Hospital Hill operates between the Central Vermont Medical Center, Berlin Mall and Shaws in Berlin and downtown Barre and offers deviations up to .75 mi off the fixed route.

Span: Weekdays 6:55 a.m. to 5:55 p.m.
Saturdays 7:55 a.m. to 5:55 p.m.
No service on Sundays

Frequency: One hour headway at all times

Ridership: FY12 Daily Average – 92

Productivity: Boardings per revenue hour – 8.3

Top Stops: Staples Plaza @ Staples (10 boardings)
Fisher Rd. @ CVH Main Entrance (10 boardings)
Berlin Mall Rd. @ Jo-Ann Fabrics (9 boardings)

Revenue: \$8,592

Gross Cost: \$250,351

Net Cost per Passenger: \$8.59

ROUTE PROFILE: 82 Montpelier Hospital Hill

Function: The Montpelier Hospital Hill operates between the Central Vermont Medical Center, Berlin Mall and Shaws in Berlin and downtown Montpelier and offers deviations up to .75 mi off the fixed route.

Span: Weekdays 7:16 a.m. to 6:16 p.m.
Saturdays 8:16 a.m. to 6:16 p.m.
No service on Sundays

Frequency: One-hour headway at all times

Ridership: FY12 Average Daily Boardings – 84

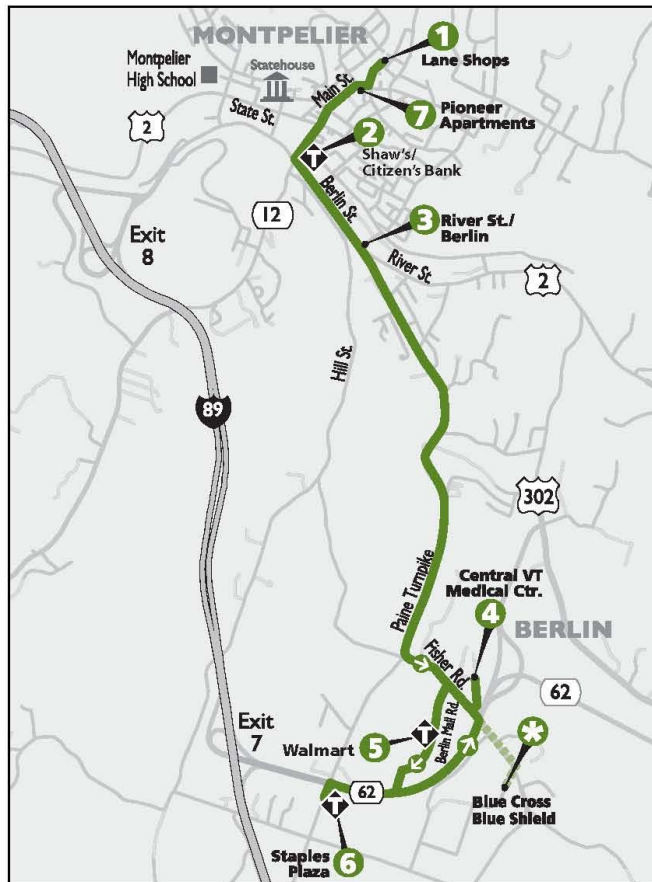
Productivity: Boardings per revenue hour – 7.7

Top Stops: Main St. @ Shaw's (26 boardings)
Berlin Mall Rd. @ Jo-Ann Fabrics (13 boardings)
Lane Shops Stop 1 (7 boardings)
Brown St. @ Pioneer Apts. (7 boardings)

Revenue: \$7,900

Gross Cost: \$248,300

Net Cost per Passenger: \$9.35



ROUTE PROFILE: 87 Northfield Community Shuttle

Function: The Northfield Community Shuttle is a fare-free shuttle operating on Wednesdays between the Northfield Grand Union Supermarket, area housing complexes, the CERV Food Shelf and the Northfield Senior Center. Route deviations up to .75 mi off the route are also allowed.

Span: Wednesday, 8:30 a.m. to 12 p.m.

Frequency: N/A

Ridership: FY12 Average Wednesday Boardings – 15

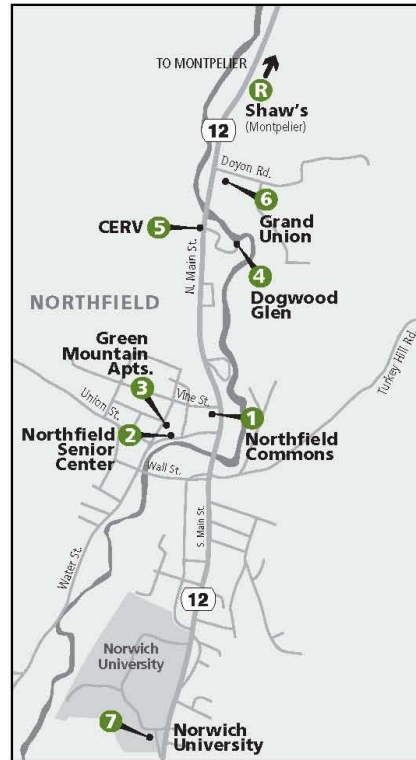
Productivity: Boardings per revenue hour – 4.2

Stops: Northfield Commons
Northfield Senior Center
Green Mountain Apartments
Dogwood Glen
CERV
Grand Union

Revenue: None

Gross Cost: \$11,525

Net Cost per Passenger: \$15.05



ROUTE PROFILE: 90 Health Center Community Shuttle

Function: The Health Center Community Shuttle is a free shuttle for doctor, dentist, and other essential medical services at the Plainfield Health Center. Service is provided from rural locations in Washington County on Mondays and Thursdays; and from Barre on Tuesdays. The shuttle may accommodate locations beyond the indicated service area as the schedule allows.

Span: Monday, Tuesday, Thursday, 10 a.m. to 2 p.m.

Frequency: N/A

Ridership: FY12 Average Daily Boardings – 7

Productivity: Boardings per revenue hour – 1.9

Stops: As Requested

Revenue: None

Gross Cost: \$39,975

Net Cost per Passenger: \$38.34