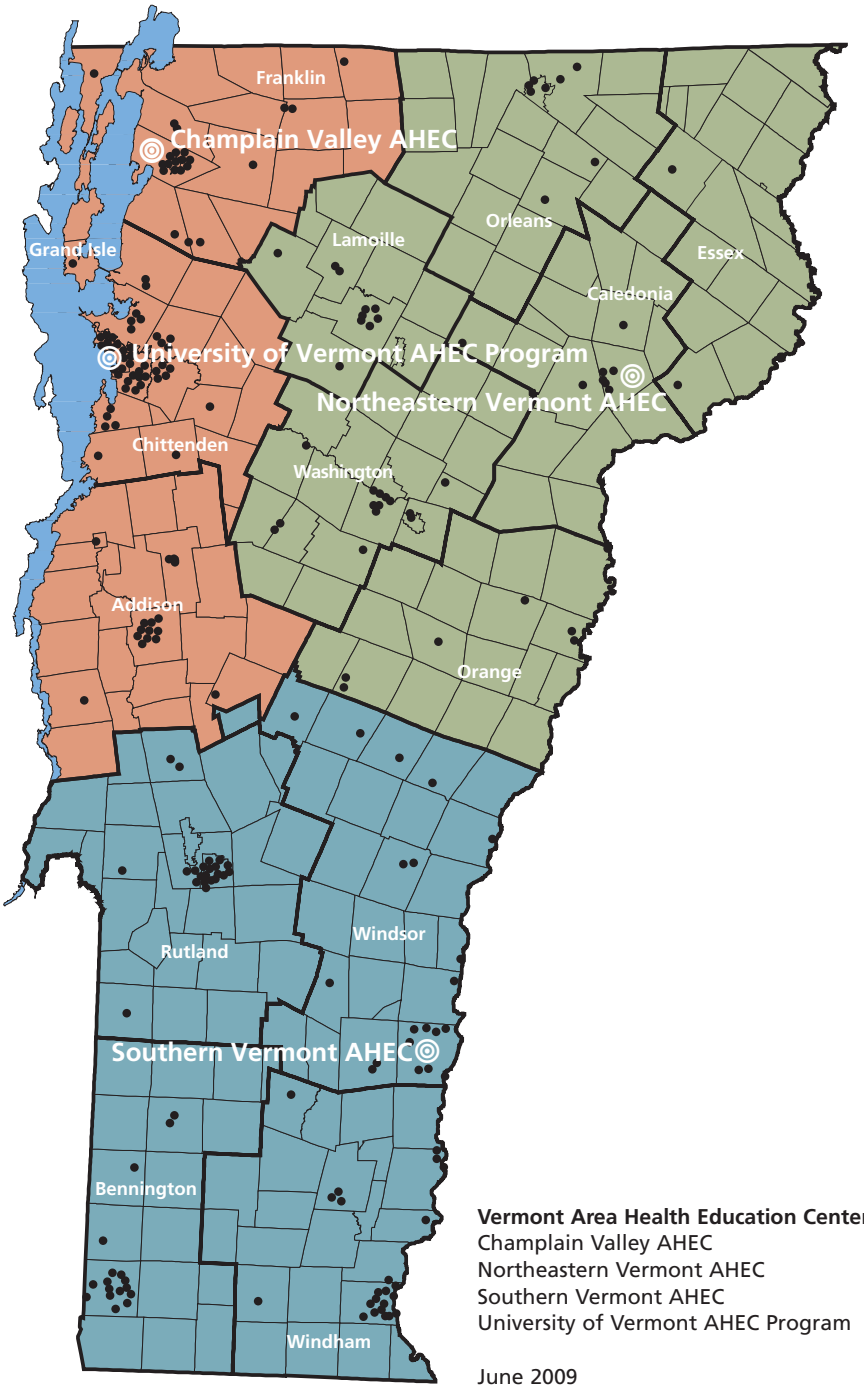
The Vermont Primary Care Workforce

2008 SNAPSHOT



Vermont Area Health Education Centers (AHEC) Network:
Champlain Valley AHEC
Northeastern Vermont AHEC
Southern Vermont AHEC
University of Vermont AHEC Program

June 2009

● Primary Care Practice Site

About Vermont AHEC

The Vermont Area Health Education Centers (AHEC) Program, in collaboration with many partners, improves access to quality healthcare through its focus on workforce development. This includes: pipeline programs in health careers awareness and exploration for youth in communities across the state; support for and engagement of health professions students at the University of Vermont and residents at Fletcher Allen Health Care; and recruitment and retention of the healthcare workforce in Vermont.

AHEC efforts focus on achieving a well-trained healthcare workforce so that all Vermonters have access to quality care, including Vermont's rural areas and underserved populations. In addition to workforce development, AHEC brings educational and quality improvement programming to Vermont's primary care practitioners and supports community health education across the state.

AHEC believes that success in healthcare innovation, transformation, and reform depends upon an adequate supply and distribution of well-trained healthcare professionals.

AHEC History & Partners

The Vermont Area Health Education Centers (VT AHEC) Program was established in 1996 by the University of Vermont College of Medicine's Office of Primary Care and is funded through multiple grants and contracts including: Federal HRSA Title VII, State of Vermont, Vermont Department of Health, University of Vermont College of Medicine, Fletcher Allen Health Care, Vermont's 13 community hospitals, and private foundations.

The statewide infrastructure of VT AHEC consists of a program office and three regional centers, each a separate 501(c)(3), non-profit organization capable of providing support for community healthcare systems. VT AHEC provides a link between the University of Vermont College of Medicine and Vermont's communities. The VT AHEC is a true academic-community partnership.

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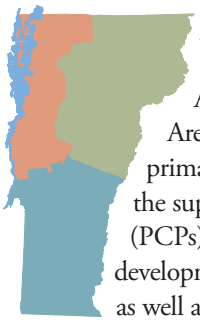


AHEC PRIMARY CARE SURVEY

Annually, each of the three community-based Area Health Education Centers (AHEC) surveys all primary care practices in its region to get a snapshot of the supply and distribution of primary care practitioners (PCPs). This inventory guides AHEC's program development to address needs of the current workforce, as well as identifies emerging workforce shortages.

This report is a compilation of the three regional surveys. Survey findings reflect a point in time and supplement, but are not intended to replace, the comprehensive survey conducted by the Vermont Department of Health of each physician at the time of relicensing every two years.

Averaging all practitioners across the state, the overall supply of PCPs is just under adequate levels, using benchmarks established by the Graduate Medical Education National Advisory Committee Report (GMENAC). However, a more refined examination of the workforce in each primary care specialty, as well as within regions of the state, shows areas of both adequacy and shortage. The most significant shortage is for primary care practitioners who care for adults. Specifically, there is a statewide shortage of internal medicine physicians.

Since the GMENAC benchmarks were established in 1980, they do not factor in the aging of Vermont's population, now the second oldest state in the country. While Vermonters are aging and placing additional demands on the healthcare system, the healthcare workforce itself is aging. The aging healthcare workforce and a decline in the number of U.S. medical school graduates who are entering general internal medicine and family medicine are significant factors contributing to the decline in the supply of primary care physicians.

Both the need for and shortage of primary care physicians are expected to increase in Vermont and nationally. National shortages tend to have a larger impact on rural regions such as Vermont, where compensation is less competitive. Thus, it is essential to address these healthcare workforce supply issues and provide access to primary care for all Vermonters through focused effort on recruitment and retention of the primary care workforce, as well as development and education of the workforce.

PRIMARY CARE PRACTIONERS (PCP) WORKFORCE INDICATORS

Supply and Distribution by Region and Specialty

The 2008 primary care office-based surveys conducted by the Champlain Valley AHEC, the Northeastern Vermont AHEC, and the Southern Vermont AHEC, identified a total of 228 primary care practice sites in Vermont. In this survey, primary care includes the specialties of family medicine (FM), general internal medicine (IM), obstetrics and gynecology (OB/GYN), and general pediatrics (PED).

There are 807 primary care practitioners (PCPs) in these practices. PCPs include 571 physicians (MDs or DOs) in the primary care specialties and 236 advanced practice registered nurses (APRNs, often known as NPs or nurse practitioners), certified nurse midwives (CNMs), and certified physician assistants (PA-Cs).

The adequacy of the supply and distribution of the primary care workforce is examined by geographic region and by primary care specialty. Physicians' scheduled in-office patient hours are collected to compute a full-time equivalent (FTE) per physician. The FTE by physician specialty and within region is then compared to established population benchmarks.

The GMENAC benchmark across the four primary care specialties combined is 80.5 primary care physicians (in FTEs) per 100,000 population. The estimated Vermont population at the time of the data collection was 621,254 (U.S. Census, 2007). Thus, the number of primary care physicians required to yield an adequate supply by this benchmark is 500 MD/DO FTEs for Vermont's population.

The supply of APRNs, CNMs and PA-Cs who work with physicians to deliver primary care is also examined to assess the primary care workforce adequacy. Based on GMENAC assumptions of three-tenths of an APRN, CNM, or PA-C for each full-time primary care physician, Vermont has developed a general adequacy guideline of one APRN/CNM/PA-C for every three primary care physicians. The statewide benchmark for an adequate supply of APRN/CNM/PA-Cs combined across Vermont is 167 FTEs.

Physicians Not Accepting New Patients

Another indicator of access to care is reflected in the proportion of physicians who limit or close their practice to new patients. Examples of limiting new patients include practices which only accept family members of current patients or accept new patients only if they are from the town where their practice is located. Since there is not an established benchmark of adequacy, the proportion of physicians in a region with limited or closed practices is reported here.

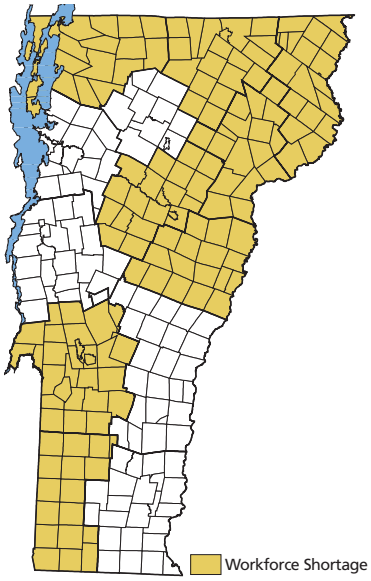
Additional details on the methodology and definitions are explained in the Endnotes (page 7).

PRIMARY CARE WORKFORCE 2008

Supply and Distribution of Physicians (MD/DOs) by County and AHEC Region

Nine of Vermont's 14 counties show a shortage of primary care physicians. Workforce shortages are highlighted in gold.

	County	No. Practice Sites	No. MD/DOs	No. MD/DOs in FTEs	Recommended MD/DOs in FTEs	County Population (2007 est.)
Northeastern	Caledonia	10	24	20.8	24.7	30,665
	Essex	2	2	1.7	5.2	6,495
	Lamoille	12	23	20.2	19.9	24,676
	Orange	7	21	18.2	23.3	29,002
	Orleans	9	18	17.1	22.0	27,302
	Washington	20	48	45.4	47.4	58,926
Champlain	Addison	15	38	30.5	29.6	36,760
	Chittenden	46	185	150.9	122.2	151,826
	Franklin	21	38	28.7	38.6	47,934
	Grand Isle	2	2	0.8	6.1	7,601
Southern	Bennington	19	31	25.4	29.3	36,452
	Rutland	22	41	39.1	50.9	63,270
	Windham	23	48	41.7	35.0	43,480
	Windsor	20	52	47.5	45.8	56,875
	TOTAL	**228**	**571**	**488**	**500**	**621,254**



Supply and Distribution of Physicians by Primary Care Specialty

The supply of internal medicine physicians to serve the primary care needs of adults in Vermont is not adequate, with a shortfall of 54 (FTEs) statewide. The number of family medicine physicians is slightly inadequate with a shortfall of 3 (FTEs). Statewide, there is an adequate supply of obstetrics/gynecology and pediatrics physicians. However, supply of physicians by each primary care specialty varies by region, as is reported in each of the AHEC regional sections (pages 4-6).

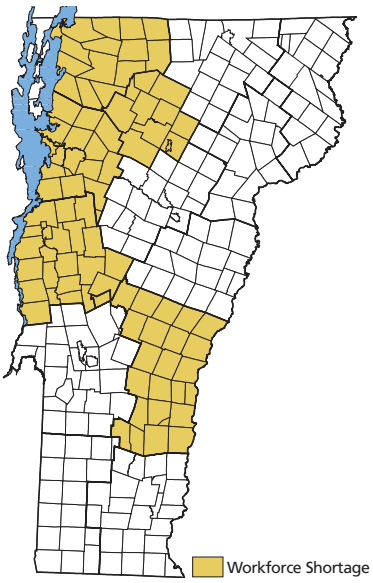
Primary Care Specialties	No. MD/DOs	No. in FTEs	Recommended in FTEs	Adequate Supply
Family Medicine	234	199	202	-3
Internal Medicine	138	121	175	-54
OB/GYN	85	80	58	+22
Pediatrics	115	88	66	+22
TOTAL	**571**	**488**	**500**	**-12***

*small discrepancies are due to rounding

Supply and Distribution of APRNs, CNMs and PA-Cs in Primary Care by County and AHEC Region

Vermont uses an overall benchmark of one APRN/CNM/PA-C for every three MD/DOs to meet the primary care needs of Vermonters, although practice arrangements vary widely across the state. Based on this benchmark and the Vermont population, the overall target of combined APRNs, CNMs and PA-Cs is 167 FTEs. The current supply is 152 FTEs, a shortfall of 15 PCPs. Counties are considered falling short of adequate if they are at least one full FTE below the recommendation.

	County	No. APRNs, CNMs & PA-Cs	No. in FTEs	Recommended in FTEs	Adequate Supply
Northeastern	Caledonia	12	9.7	8.2	1.5
	Essex	3	1.8	1.7	0.1
	Lamoille	7	4.2	6.6	-2.4
	Orange	16	7.7	7.8	-0.1
	Orleans	13	11.3	7.3	4
	Washington	23.8	16.4	15.8	0.6
Champlain	Addison	7	3.7	9.9	-6.2
	Chittenden	63	36.5	40.7	-4.2
	Franklin	11	9.2	12.9	-3.7
	Grand Isle	3	1.2	2.0	-0.8
Southern	Bennington	12	9.7	9.8	-0.1
	Rutland	26	18.4	17.0	1.4
	Windham	20	12.0	11.7	0.3
	Windsor	19	9.9	15.3	-5.4
	TOTAL	**236**	**152**	**167**	**-15**



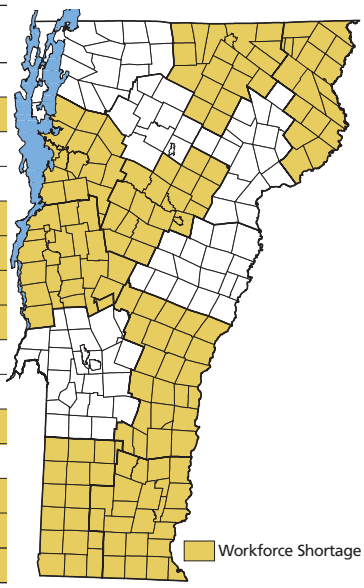
Supply of Other PCPs by Practice Discipline

APRNs, CNMs & PA-Cs (combined)	No.	No. in FTEs	Recommended in FTEs	Adequate Supply
Advanced Practice RN	129	78	n/a	
Cert. Nurse Midwives	36	21	n/a	
Cert. Physician Assistants	71	53	n/a	
TOTAL	**236**	**152**	**167**	**-15**

Physicians Not Accepting New Patients by County and AHEC Region

Statewide, about one-third (31%) of primary care physicians are either not accepting or limiting their acceptance of new patients, but this varies by region and physician specialty. In eight counties, at least one quarter, and up to 61% of physicians are not accepting or are limiting acceptance of new patients.

	County	Physicians Limited/ Closed Practice
Northeastern	Caledonia	13%
Northeastern	Essex	38%
Northeastern	Lamoille	15%
Northeastern	Orange	5%
Northeastern	Orleans	50%
Northeastern	Washington	61%
Champlain	Addison	34%
Champlain	Chittenden	31%
Champlain	Franklin	16%
Champlain	Grand Isle	0%
Southern	Bennington	33%
Southern	Rutland	23%
Southern	Windham	39%
Southern	Windsor	27%
	TOTAL AVERAGE STATEWIDE	**31%**



Looking specifically at internal medicine physicians (primary care for adults) and family medicine physicians (who care for both adults and children), 43% have closed or limited their practice to new patients. Availability of internal and family medicine physicians is examined within each AHEC region (pages 4-6) to understand the impact of this shortage across different regions of the state.

PRIMARY CARE WORKFORCE 2008 SUMMARY FINDINGS

- Combining all primary care specialties, Vermont currently has 488 primary care physicians (in FTEs), which is less than the overall adequate number of 500 FTEs;
- The combined supply of APRNs, CNMs and PA-Cs is 152 FTEs, which is below the adequate number of 167 FTEs statewide;
- The combined supply of physicians and other PCPs does not adequately meet the needs for PCPs in Vermont statewide, with adequacy and shortages varying by region and specialty;
- Regional distributions show a less than adequate supply of primary care physicians in 9 of Vermont's 14 counties;
- Combining APRNs, CNMs and PA-Cs, regional distributions show a less than adequate supply in five counties;
- Franklin County shows a shortfall of both primary care physicians and other PCPs;
- Analysis by primary care specialty shows a serious shortage statewide in primary care physicians for adults. Specifically, there is an overall shortfall of 54 (FTEs) internal medicine physicians which affects access to primary care for adult patients in all regions. There is also a slight shortfall in family medicine (serving both adults and children) physicians statewide;
- While the overall supply of pediatricians and obstetrics/ gynecology physicians is adequate statewide, mal-distribution limits access to care for some Vermonters;
- On average, about one-third of all primary care physicians are not accepting or are limiting acceptance of new patients. This varies by region. Washington County shows more than 60% of the primary care physicians limiting or closing their practices to new patients, followed by Orleans County where half of the physicians have limited or closed practices; and
- The specialties of family and internal medicine physicians have particularly limited availability with 43% of these practitioners having limited or closed their practices to new patients.

Considering the challenges to primary care in Vermont due to the growing numbers of elderly Vermonters and the accompanying increases in chronic illnesses, the aging of the workforce itself, and the smaller supply of new primary care physicians, Vermont must focus on fostering an adequate supply of primary care practitioners to ensure access to care for all Vermonters.

Champlain Valley AHEC

Addison, Franklin, Chittenden and Grand Isle Counties

There are 84 practices and 263 primary care physicians in the Champlain Valley AHEC's four-county region. The combined county populations equal 244,121. The total physician FTE is 210.9, which is 14 physicians more than the benchmark recommendations of 196.5. A closer examination of physicians by primary care specialty shows significant shortages in primary care physicians for adults, specifically in internal and family medicine.

PRIMARY CARE SPECIALTIES (MD/DOs)

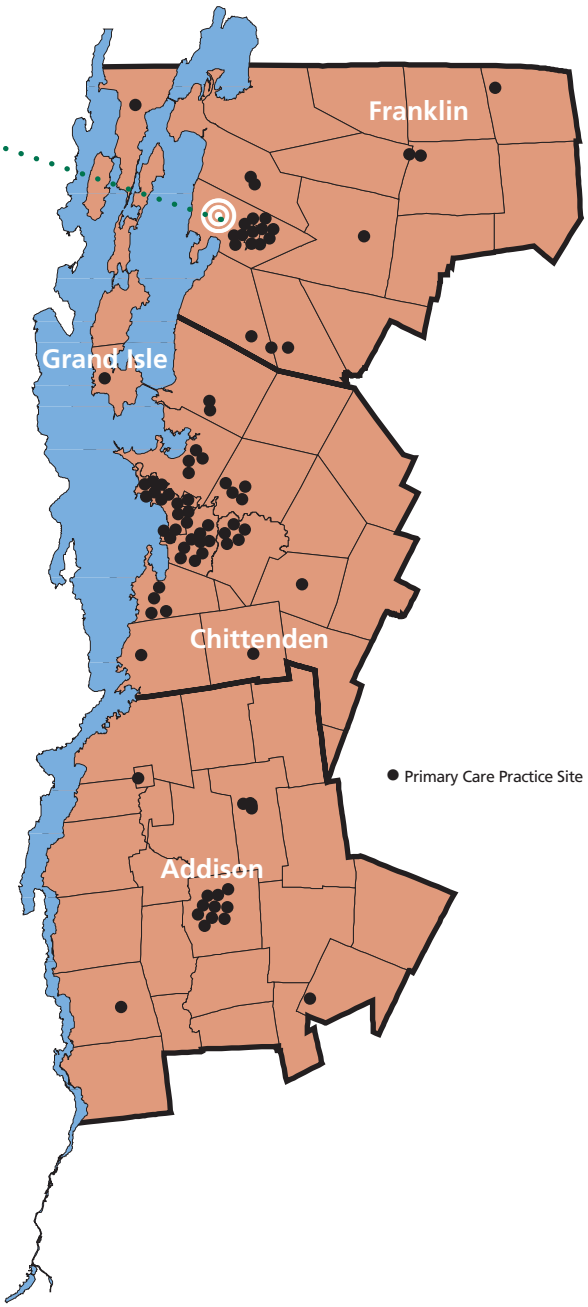
Specialties	No.	No. in FTEs	Recommended in FTEs	Adequate Supply
Family Medicine	86	67.6	79.3	-11.7
Internal Medicine	64	54.4	68.6	-14.2
Obstetrics/Gynecology	50	45.0	22.5	+22.5
Pediatrics	63	43.9	26.1	+17.8

The shortfall of internal and family medicine physicians, is impacting every county within this region, as seen in the chart below. (Shortfalls are defined as at least one full FTE below the recommendation.)

FAMILY MEDICINE (FM) & INTERNAL MEDICINE (IM) PHYSICIAN SHORTFALL

County	Specialty	No.	No. in FTEs	Recommended in FTEs	Adequate Supply
Addison					-1.0
	FM	17	14.4	11.9	
	IM	7	6.8	10.3	
Chittenden					-6.3
	FM	56	43.7	49.3	
	IM	48	42.0	42.7	
Franklin					-14.6
	FM	11	8.8	15.6	
	IM	9	5.7	13.5	
Grand Isle					-3.8
	FM	2	0.8	2.5	
	IM	0	0.0	2.1	

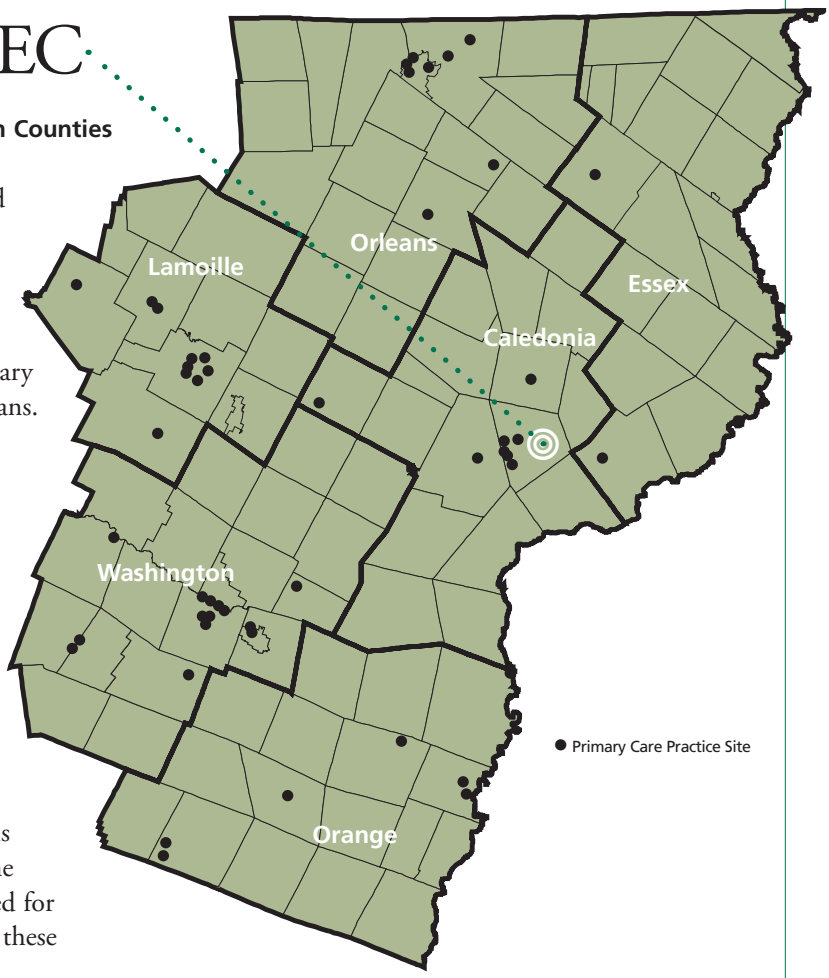
Almost half (46%) of internal and family medicine physicians in the Champlain Valley are either limiting or not accepting new patients. There is also a shortfall of 15 APRN/CNM/PA-Cs in primary care. Specific regional conditions further affect primary care. For example, refugee resettlement in the Chittenden County area is resulting in many new patient assessments in adult and child primary care.



Northeastern Vermont AHEC

Caledonia, Essex, Lamoille, Orange, Orleans, and Washington Counties

There are 60 practices and 136 primary care physicians in Northeastern Vermont AHEC's six-county region. The combined county populations equal 177,056. The total physician FTE is 123.4, which is 19 physicians fewer than the recommended 142.5 FTEs among all primary care specialties. The Northeastern Vermont region includes some of the most rural and isolated areas of the state. The greatest shortfall is in adult primary care with a shortage of 22 internal and family medicine physicians. The geographic distribution of practice sites also leaves many areas without adequate services resulting in patients having to travel for their primary care services.



PRIMARY CARE SPECIALTIES (MD/DOs)

Specialties	No.	No. in FTEs	Recommended in FTEs	Adequate Supply
Family Medicine	62.5	54.9	57.5	-2.6
Internal Medicine	31.5	30.1	49.8	-19.7
Obstetrics/Gynecology	18.0	18.2	17.2	+1.0
Pediatrics	24.0	20.2	18.1	+2.1

The shortfall of either internal and family physicians, or both, is seen across the region, as shown in the accompanying chart. The recommended number of APRNs, CNMs, and PA-Cs combined for the region is 47.5 FTEs. There are currently 51.1 FTEs among these PCPs. This adequate supply is particularly important given the significant shortfall of primary care physicians for adults in this region.

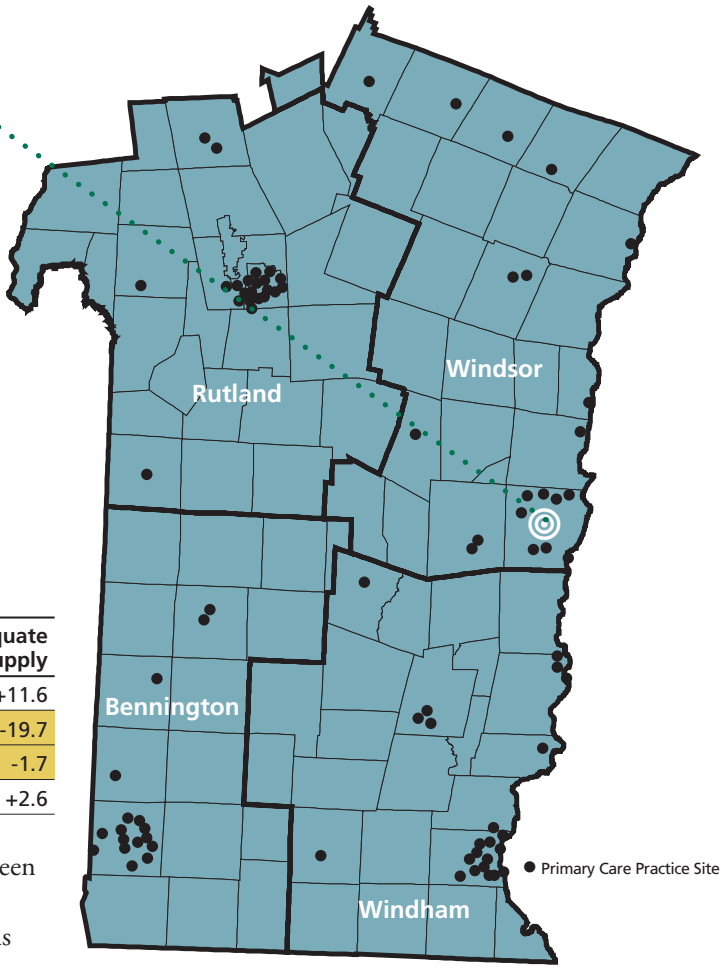
FAMILY MEDICINE (FM) & INTERNAL MEDICINE (IM) PHYSICIAN SHORTFALL

County	Specialty	No.	No. in FTEs	Recommended	Adequate Supply
Caledonia					-4.1
	FM	10.0	8.0	10.0	
	IM	6.5	6.5	8.6	
Essex					-2.4
	FM	1.0	0.7	2.1	
	IM	0.5	0.8	1.8	
Lamoille					+2.3
	FM	15.0	13.9	8.0	
	IM	5.0	3.3	6.9	
Orange					-9.2
	FM	7.0	5.8	9.4	
	IM	2.5	2.5	8.1	
Orleans					-6.0
	FM	6.0	5.1	8.9	
	IM	5.5	5.5	7.7	
Washington					-2.9
	FM	23.5	21.4	19.2	
	IM	11.5	11.5	16.6	

In addition to the need for 22 internal and family medicine physicians, 42% of the current physicians in these primary care specialties are either limiting or not accepting new patients.

Workforce Shortage

Southern Vermont AHEC



Bennington, Rutland, Windham, and Windsor Counties

There are 84 practices and 172 primary care physicians practicing in Southern Vermont AHEC's four-county region. The combined county populations equal 200,077. The total physician FTE is 153.8, which is seven fewer than the recommended 161.1 FTEs among all primary care specialties. Even with the adequate supply in family medicine (care for both adults and children), there remains an overall shortage of primary care physicians for adults in this region due to an undersupply of internal medicine physicians, as well as a small shortfall in the number of obstetrics/gynecology physicians in this region.

PRIMARY CARE SPECIALTIES (MD/DOs)

Specialties	No.	No. in FTEs	Recommended in FTEs	Adequate Supply
Family Medicine	85	76.7	65.0	+11.6
Internal Medicine	42.5	36.5	56.2	-19.7
Obstetrics/Gynecology	17	16.7	18.4	-1.7
Pediatrics	27.5	24.0	21.4	+2.6

The shortfall of internal medicine physicians varies by county, as seen in the accompanying chart. In addition, in the Southern Vermont region, 40% of the current family and internal medicine physicians are either limiting or not accepting new patients.

FAMILY MEDICINE (FM) & INTERNAL MEDICINE (IM) PHYSICIAN SHORTFALL

County	Specialty	Number of	Number in FTEs	Recommended in FTEs	Adequate Supply
Bennington					-3.6
	FM	17	14.4	11.8	
	IM	7	4.0	10.2	
Rutland					-9.6
	FM	23	21.2	20.6	
	IM	8	7.6	17.8	
Windham					+5.1
	FM	25	21.4	14.1	
	IM	11	10.0	12.2	
Windsor					+0.1
	FM	20	19.7	18.5	
	IM	17	14.9	16.0	

The recommended number of APRNs, CNMs, and PA-Cs combined for the region is 53.7 FTEs. There are currently 50.0 FTEs, a shortfall of four PCPs, in addition to the overall shortfall in primary care physicians.

Workforce Shortage

ENDNOTES

1. Primary Care Survey: Office administrators from all primary care practices (FM, IM, OB/GYN, and PED) in Vermont are surveyed by VT AHEC annually. In most cases, the practice receives the previous year's survey from their regional AHEC and updates personnel and their in-office patient hours (the hours blocked-in for each practitioner to see patients) to reflect the current, typical, weekly office hours of the physicians (MD/DOs), advanced practice registered nurses (APRNs), certified nurse midwives (CNMs), and certified physician assistants (PA-Cs) in the practice. Per diem practitioners have not been included in the report if the practitioner is temporary and the practice is searching for a permanent practitioner. However, some "temporary" practitioners are effectively permanent staff members, often filling seasonal or other regular needs. These practitioners are included in the office practice survey.

2. Physician Full-Time Equivalent (FTE): Calculating a Full-Time Equivalent for physicians is based on reported in-office patient hours using a method developed by federal agencies to measure physician shortage areas in geographic regions (http://bhpr.hrsa.gov/shortage/hpsaguidepc.htm). This upward adjustment of hours (see chart below) reflects both the additional in-office hours for diagnosis, treatment, and clinical reports, such as researching conditions or new drugs, reading test results, consulting with other practitioners for treatment or referral, calling a pharmacy for a prescription, completing medical records and paperwork associated with clinical notes, and billing documentation outside of the regularly scheduled office hours, all in the course of direct patient care. In addition to the in-office hours recorded in the survey, physicians typically spend hours outside of the office involved in patient care including: care at the hospital, nursing home, emergency department or in the patient's home. The adjustment also reflects these additional patient care hours. The adjustments are:

Primary Care Specialty	Office Hours		Adjustment Factor		Hours Per Week		Full-Time Equivalent
FP	#	x	1.4	÷	40	=	FTE
IM	#	x	1.8	÷	40	=	FTE
OB/GYN	#	x	1.9	÷	40	=	FTE
PED	#	x	1.4	÷	40	=	FTE

No physician is assigned to be more than 1 FTE, even if their adjusted hours exceed 40 per week. If, after the adjustment, the physician's typical week is less than 40 hours, they are considered less than one FTE and reported as a decimal (in tenths). Physicians with more than one primary care specialty or at more than one practice site have their FTE split proportionately. There are some small discrepencies due to rounding.

3. APRN, CNM, and PA-C Full-Time Equivalent (FTE): Full-Time Equivalent for these primary care clinicians is based on the current, typical weekly office hours reported on the survey. There are no adjustments to these hours when calculating an FTE. Based on GMENAC assumptions of three-tenths of an APRN, CNM, or PA-C for every primary physician, the Vermont Department of Health has considered it a shortage if there is less than one APRN/CNM/PA-C for every three primary care physicians in a region. Thus, the benchmark calculation for analyzing the primary care survey is one APRN/CNM/PA-C FTE for every three FTE physicians per 100,000 population. At the county level, if there was less than one whole FTE practitioner, the county was identified as a shortage area.

It should be further noted that for the purposes of this document, Advanced Practice Registered Nurse (APRN) is the term used to describe Nurse Practitioners, as APRN is used by the Board of Nursing in Vermont.

4. Analysis of Primary Care Need: AHEC uses the same benchmark as the Vermont Department of Health, which is based on guidelines from the Graduate Medical Education National Advisory Committee Report (GMENAC, 1981). The GMENAC benchmark for the distribution of primary care physicians per population in a geographic region is: 80.5 Full-Time Equivalent Primary Care Physicians per 100,000 population across the four primary care specialties. Given the estimated Vermont population at the time of the data collection, 621,254 (U.S. Census, VT estimated population, 2007), the number of primary care physicians required to yield an adequate supply by this benchmark is 500 MD/DO FTEs for Vermont's population. For APRNs, CNMs, and PA-Cs, the benchmark is one for every three FTE primary care physicians. The statewide benchmark for an adequate supply of APRN/CNM/PA-Cs combined across Vermont is 167 FTEs.

GMENAC PHYSICIAN RECOMMENDATIONS

Overall Primary Care	80.5 primary care physicians per 100,000
FM	32.5 FM physicians per 100,000
IM	28.1 IM physicians per 100,000
OB/GYN	9.2 OB/GYN physicians per 100,000
PED	10.7 PED physicians per 100,000

UNIVERSITY OF VERMONT
COLLEGE OF MEDICINE

AHEC

AREA HEALTH EDUCATION CENTERS PROGRAM

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