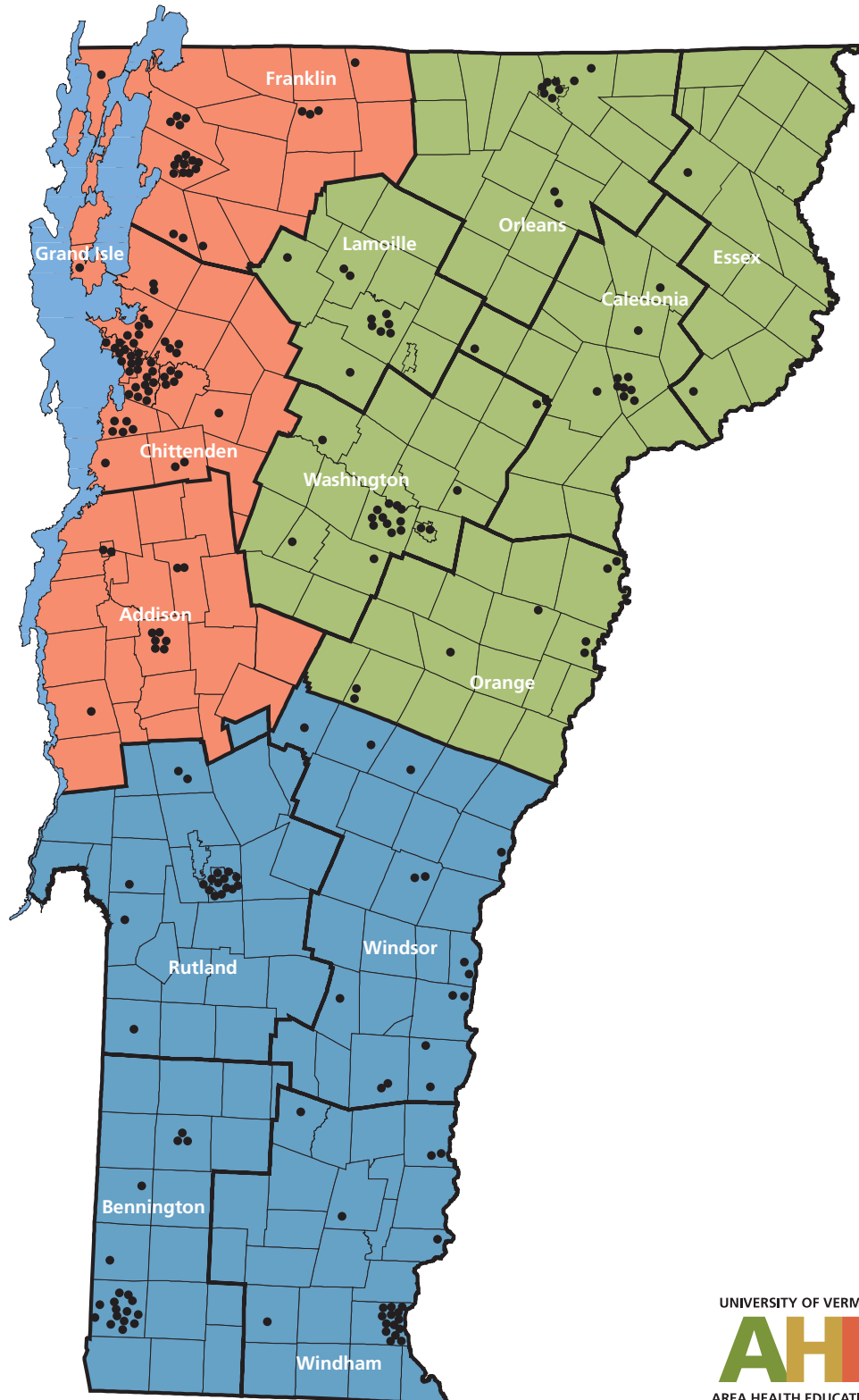


The Vermont Primary Care Workforce

2013 SNAPSHOT

WORKFORCE CONTINUES TO SHOW IMPROVEMENT
BUT SHORTAGE IN ADULT PRIMARY CARE PERSISTS



● Primary Care Practice Sites in Vermont AHEC Regions

About Vermont AHEC

The Vermont Area Health Education Centers (AHEC) Program, in collaboration with many partners, improves access to health care through its focus on workforce development. AHEC work includes: support for pipeline programs in health careers awareness and exploration for Vermont youth; support for and engagement of health professions students at the University of Vermont and residents at Fletcher Allen Health Care; and support to help recruit and retain an appropriate healthcare workforce in Vermont.

In addition to healthcare workforce development, AHEC brings educational and quality improvement programming to Vermont's primary care practitioners and supports community health education.

AHEC believes that success in healthcare innovation, transformation, and reform depends on an adequate supply and distribution of well-trained healthcare professionals so that *all* Vermonters, including those who live in rural areas and underserved populations, have access to primary preventive healthcare.

AHEC History & Partners

The Vermont Area Health Education Centers Program was established in 1996 by the Office of Primary Care at the University of Vermont College of Medicine. AHEC 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, private foundations, and individual contributors.

The statewide infrastructure of AHEC consists of a program office at the University of Vermont College of Medicine and three regional centers which are each a 501(c)(3), non-profit organization. AHEC is a dynamic, academic-community partnership linking the University of Vermont College of Medicine and communities in every county of the state.

Acknowledgments

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Contact AHEC

University of Vermont College of Medicine
Office of Primary Care
AHEC Program
Burlington, VT
802-656-2179
www.vtahec.org

Northeastern Vermont Area Health Education Center
St. Johnsbury, VT
802-748-2506
www.nevahec.org

Champlain Valley Area Health Education Center
St. Albans, VT
802-527-1474
www.cvahec.org

Southern Vermont Area Health Education Center
Springfield, VT
802-885-2126
www.svahec.org

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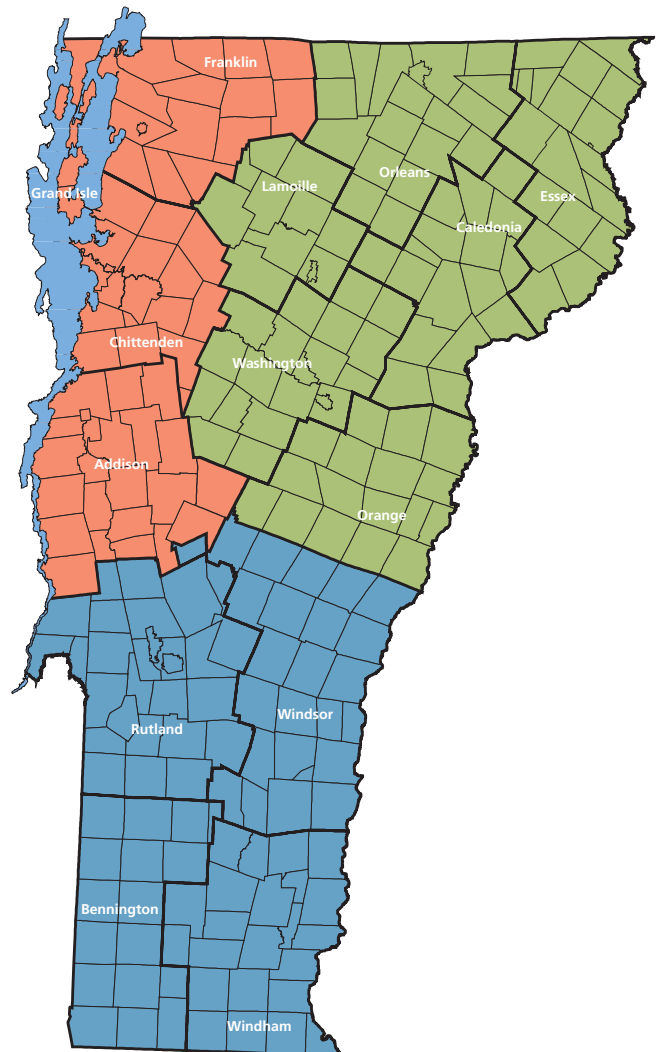
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Workforce Continues to Show Improvement but Shortage in Adult Primary Care Persists

- In this report, practitioners include physicians, advanced practice registered nurses, certified nurse midwives, and certified physician assistants who work in family medicine, internal medicine, pediatrics, and obstetrics-gynecology practice sites.
- In Vermont, during the three-year period of 2011 to 2013, the number of primary care practitioners grew; **however, the shortage of adult primary care practitioners continued statewide.**

- The largest shortfall continued in primary care internal medicine whose practitioners care for adults.
- The strongest growth was in family medicine whose practitioners care for both adults and children.
- The need for primary care practitioners who care for adults was further supported by the percentage of practitioners limiting or closing their practice to new patients.

Almost two-thirds of the internal medicine physicians and almost half of the family medicine physicians continued to limit or close their practice to new patients in 2013.



PRIMARY CARE PRACTITIONERS – STATEWIDE FINDINGS 2013

Primary Care Practice Sites

In 2013, there were 215 primary care practice sites in Vermont, including family medicine, general internal medicine, general pediatrics, and general obstetrics-gynecology sites. (See Endnotes for additional criteria used to define primary care sites.)

From Individual Practitioners to FTEs

In 2013, there were 559 individual physicians (MD/DOs), 150 individual advanced practice registered nurses (APRNs), 34 certified nurse midwives (CNMs), and 83 certified physician assistants (PA-Cs) practicing in Vermont primary care practices, yielding 826 individual primary care practitioners (PCPs) (see Table 1). This was a net increase of 12 individual PCPs from 2012.¹

For comparisons to national benchmarks, the count of individual PCPs (see “No. PCPs” in Table 1), was converted to Full-Time Equivalents (FTEs) (see “No. in FTEs” in Table 1) to standardize the measurement of **clinical time/effort**. This is important since there are both part-time and full-time practitioners at primary care sites. Part-time practitioners may be sharing their clinical time among small rural sites, may have only part-time clinical hours with the balance of their time devoted to administrative or research responsibilities, or may practice part-time for other reasons.


In 2013, combining all primary care specialties, the primary care workforce grew by 8 physician FTEs and 10 APRN, CNM, and PA-C FTEs (see Table 1, “Supply to Benchmark”).

Table 1: All Primary Care Practitioners by Discipline

Discipline	No. PCPs (2013)	No. in FTEs* (2013)	Supply to Benchmark in FTEs*		
			2011	2012	2013
PHYSICIANS (MD/DOs)	559	492	-35	-20	-12
APRNs, CNMs, PA-Cs (combined)	267	185	-5	7	17
Advanced Practice Registered Nurses (APRNs)	150	101			
Certified Nurse Midwives (CNMs)	34	21			
Certified Physician Assistants (PA-Cs)	83	62			

Supply to Benchmark in FTEs*

2011	2012	2013
-35	-20	-12
-5	7	17

* small discrepancies are due to rounding
 workforce shortage

National benchmarks are used to determine the number of primary care practitioners needed for an adequate supply of PCPs, when applied to the Vermont population. When the “Supply to Benchmark” is positive, the PCP supply is adequate for the population. When “Supply to Benchmark” is negative, there is a shortfall of PCPs. PCP shortfalls are highlighted in the tables and maps. (See Endnotes for additional details on methods.)

1. Area Health Education Centers Program (AHEC). The Vermont Primary Care Workforce, 2012 Snapshot. Burlington, VT. Jan 2013.

Primary Care Practitioners by Specialty (in FTEs)

Combining physicians (see Table 2) with APRNs and PA-Cs (see Table 3) in internal and family medicine, the **overall increase in all PCPs in 2013 showed some improvement in the area of greatest need in Vermont: primary care services for adults. However, shortage in adult primary care persisted.** Further evidence of the need for PCPs in adult primary care is presented in the regional sections of this report in Tables 10, 11, and 12.

Table 2: Primary Care Physicians by Specialty

Primary Care Specialty	No. MD/DOs (2013)	No. MD/DOs in FTEs* (2013)
Family Medicine	242	212
Internal Medicine	130	117
Obstetrics–Gynecology	78	71
Pediatrics	109	93
TOTAL STATEWIDE	559	492

* small discrepancies are due to rounding workforce shortage

Supply to Benchmark in FTEs*

	2011	2012	2013
	-6	-2	8
	-58	-60	-59
	6	13	13
	24	29	26
	-35	-20	-12

Table 3: Primary Care APRNs, CNMs, and PA-Cs by Specialty

Primary Care Specialty	No. APRNs, CNMs, PA-Cs (2013)	No. APRNs, CNMs, PA-Cs (combined) in FTEs* (2013)
Family Medicine	149	109
Internal Medicine	39	26
Obstetrics–Gynecology	51	31
Pediatrics	29	18
TOTAL STATEWIDE	267	185

* small discrepancies are due to rounding workforce shortage

Supply to Benchmark in FTEs*

	2011	2012	2013
	30	38	41
	-34	-35	-33
	6	10	12
	-6	-6	-4
	-5	7	17

Limiting New Patients by Specialty

While there were small improvements in 2013, **almost half of the family medicine physicians and two-thirds of the internal medicine physicians in Vermont continued to limit or close their practice to new patients.** Limitations included only accepting new patients if they lived in the practice town or if a family member was already a patient at the practice. Similar to the physician trend, the greatest percent of APRNs and PA-Cs limiting or closing their practice to new patients was in internal and family medicine practices (see Tables 4-5).

Table 4: Primary Care Physicians Limiting or No Longer Accepting New Patients by Specialty

Primary Care Specialty	% MD/DOs (2011)	% MD/DOs (2012)	% MD/DOs (2013)
Family Medicine	51%	47%	47%
Internal Medicine	68%	66%	63%
Obstetrics–Gynecology	17%	15%	10%
Pediatrics	12%	13%	14%
TOTAL STATEWIDE	43%	40%	39%

Table 5: Primary Care APRNs, CNMs, and PA-Cs Limiting or No Longer Accepting New Patients by Specialty

Primary Care Specialty	% APRNs, CNMs, PA-Cs (2011)	% APRNs, CNMs, PA-Cs (2012)	% APRNs, CNMs, PA-Cs (2013)
Family Medicine	38%	32%	28%
Internal Medicine	53%	61%	54%
Obstetrics–Gynecology	14%	5%	4%
Pediatrics	39%	7%	18%
TOTAL STATEWIDE	36%	28%	26%

Primary Care Practitioners by Region (in FTEs)

Examining primary care physicians across all specialties by regions of the state, the Northeastern and Champlain Valley AHEC regions reflected the statewide trend and showed some improvement in the total number of primary care physician FTEs in 2013. There was no overall change in Southern Vermont (see Table 6, “Supply to Benchmark” for Northeastern VT, Champlain Valley, and Southern VT). **Despite the overall increase since 2012, the need for primary care services for adults within each region continued in 2013**, as shown in further regional breakdowns **by specialty** in Tables 10, 11, and 12.

Table 6: Primary Care Physicians by County

County	Population (est. 2012)	No. Practice Sites (2013)	No. MD/DOs in FTEs* (2013)	Supply to Benchmark in FTEs*		
				2011	2012	2013
NORTHEASTERN VERMONT				-9	-5	-3
Caledonia	31,121	10	25	-1	-1	0
Essex	6,226	2	2	-3	-3	-3
Lamoille	24,958	9	20	-1	-1	0
Orange	28,924	8	22	-3	-3	-1
Orleans	27,109	11	22	-4	0	0
Washington	59,465	18	49	3	3	1
CHAMPLAIN VALLEY				-7	-3	3
Addison	36,745	11	32	-1	-4	2
Chittenden	158,504	53	144	6	15	16
Franklin	48,214	21	28	-8	-9	-11
Grand Isle	6,983	2	1	-4	-5	-4
SOUTHERN VERMONT				-19	-12	-12
Bennington	36,697	19	28	-3	1	-2
Rutland	60,869	18	42	-10	-8	-7
Windham	43,985	20	42	5	3	7
Windsor	56,211	13	35	-11	-7	-10
TOTAL STATEWIDE	626,011	215	492	-35	-20	-12

* small discrepancies are due to rounding workforce shortage.

In 2013, the number of APRNs, CNMs, and PA-Cs in FTEs showed improvement in the Champlain Valley and Southern regions, but a small decline in Northeastern Vermont combining all primary care specialties (see Table 7, “Supply to Benchmark”).

Table 7: Primary Care APRNs, CNMs, and PA-Cs by Region by County

County	No. APRNs, CNMs, PA-Cs (combined) in FTEs* (2013)
NORTHEASTERN VERMONT	
Caledonia	10
Essex	2
Lamoille	7
Orange	9
Orleans	9
Washington	20
CHAMPLAIN VALLEY	
Addison	9
Chittenden	41
Franklin	13
Grand Isle	2
SOUTHERN VERMONT	
Bennington	9
Rutland	15
Windham	12
Windsor	15
TOTAL STATEWIDE	173

Supply to Benchmark in FTEs*

2011	2012	2013
8	11	8
1	2	3
0	1	1
0	1	-2
1	1	0
3	2	3
3	4	3
-12	-2	2
-4	-1	-2
-10	-2	2
1	0	3
-1	0	-1
-1	-2	6
0	-1	0
1	-2	1
0	0	4
-2	0	1
-5	7	17

* small discrepancies are due to rounding workforce shortage

Limiting New Patients By Region

From 2011 to 2013, the overall improvement in the total number of primary care MD/DOs, APRNs, CNMs, and PA-Cs was generally associated with a decline in the percent of PCPs limiting or not accepting new patients (see Tables 8 & 9).

Table 8: Primary Care Physicians Limiting or No Longer Accepting New Patients by County

County	% MD/DOs (2011)	% MD/DOs (2012)	% MD/DOs (2013)
Northeastern Vermont	51%	43%	44%
Champlain Valley	40%	42%	41%
Southern Vermont	40%	35%	32%
TOTAL STATEWIDE	43%	40%	39%

Table 9: Primary Care APRNs, CNMs, and PA-Cs Limiting or No Longer Accepting New Patients by County

County	% APRNs, CNMs, PA-Cs (2011)	% APRNs, CNMs, PA-Cs (2012)	% APRNs, CNMs, PA-Cs (2013)
Northeastern Vermont	38%	26%	26%
Champlain Valley	38%	32%	25%
Southern Vermont	33%	25%	27%
TOTAL STATEWIDE	36%	28%	26%

Northeastern Vermont

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

In 2013, there were 58 primary care practices (see adjacent map) in this six-county region of 177,803 Vermonters. The 151 primary care physicians and 82 APRNs, CNMs, and PA-Cs combined to yield a total primary care workforce of 233 individual practitioners.

Supply and Distribution by County (in FTEs)

From 2011 to 2013, combining all primary care specialties, the supply of primary care physicians improved by six FTEs (see Table 6). Essex County continued to show the greatest need. The supply of APRNs, CNMs, and PA-Cs remained adequate across the region, with some variation by county (see Table 7).

The proportion of PCPs in the region reporting that their practices were either limited or closed to new patients showed a decline from 2011 to 2013 as supply improved over the same period (see Tables 8 & 9).

Supply and Distribution by Specialty (in FTEs)

While there has been a small increase in family medicine physician FTEs from 2011 to 2013 (see Table 10), there continued to be a shortfall of primary care physicians for adults combining family and internal medicine. The shortfall occurred in Caledonia, Essex, Orleans, and Orange Counties, as illustrated in the small map below.

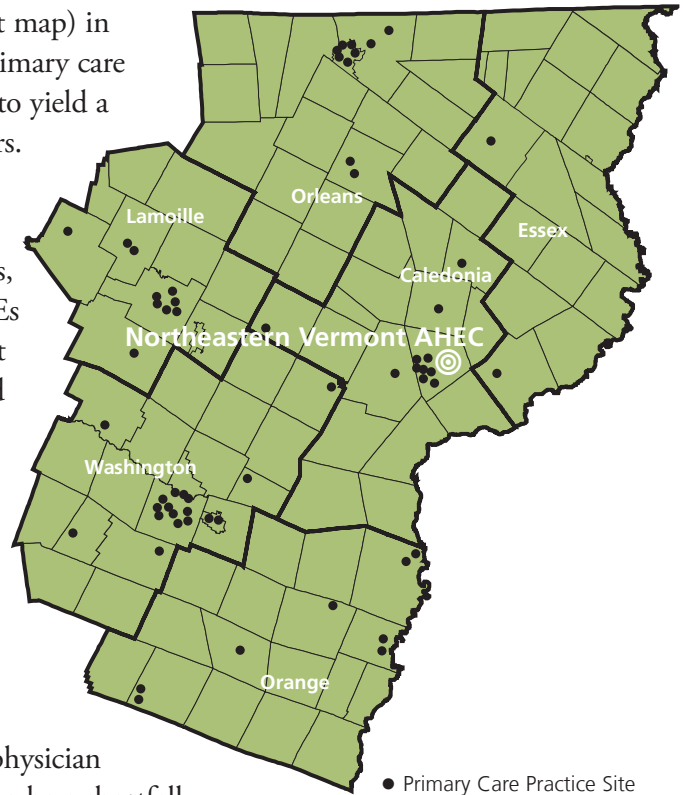


Table 10: Primary Care Physicians by Specialty

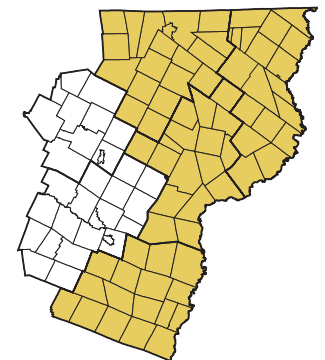
Primary Care Specialty	No. MD/DOs in FTEs* (2013)
Family Medicine	64
Internal Medicine	35
Obstetrics–Gynecology	17
Pediatrics	23

* small discrepancies are due to rounding

workforce shortage

Supply to Benchmark in FTEs*

	2011	2012	2013
Family Medicine	5	6	7
Internal Medicine	-18	-15	-15
Obstetrics–Gynecology	2	0	2
Pediatrics	3	4	4



Workforce shortage in internal and family medicine physicians combined

PCPs Limiting or Not Accepting New Patients

In 2013, 57% of family and internal medicine physicians and 35% of family and internal medicine APRNs and PA-Cs in this region limited or closed their practice to new patients.

Champlain Valley

Addison, Chittenden, Franklin, and Grand Isle Counties

In 2013, there were 87 primary care practices (see adjacent map) in this four-county region of 250,446 Vermonters. The 247 primary care physicians and 100 APRNs, CNMs, and PA-Cs combined to yield a total primary care workforce of 347 individual practitioners.

Supply and Distribution by County (in FTEs)

For the period 2011 to 2013, the region showed improvement in the total number of physician FTEs. However, the increase was driven by Addison and Chittenden Counties. Franklin County continued to show an overall decline in the number of primary care physician FTEs and high need. Grand Isle County continues to show need (see Table 6).

The region showed overall improvement in the supply of APRNs, CNMs, and PA-Cs across primary care specialties from 2011 to 2013 (see Table 7). This improvement was also reflected in the proportion of these PCPs limiting or closing their practice to new patients across the same period (see Table 9).

Supply and Distribution by Specialty (in FTEs)

The supply of primary care physicians for adults, including family and internal medicine, continued to show a high need, though there was improvement across time with a net increase in the number of family medicine physicians (see Table 11). The supply of obstetrics-gynecology and pediatric physician FTEs continued to be adequate.

As illustrated on the small map below, Franklin, Grand Isle, and Chittenden Counties continued to experience a shortfall of physicians to serve adults in primary care in 2013.

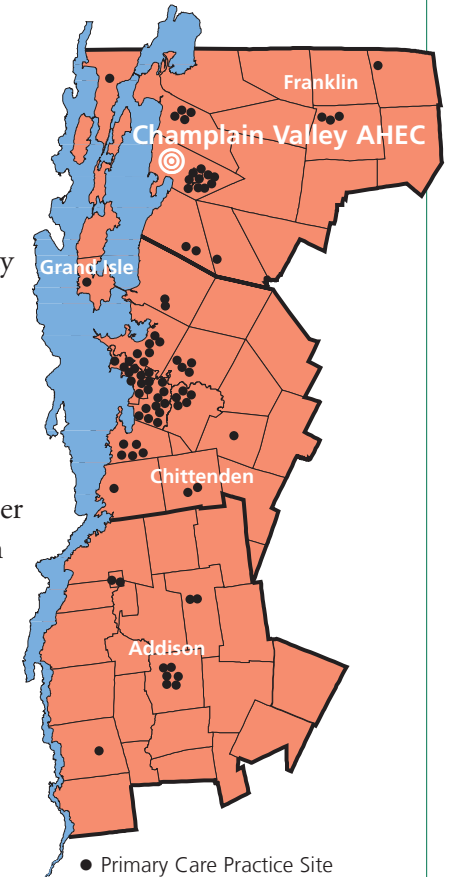


Table 11: Primary Care Physicians by Specialty

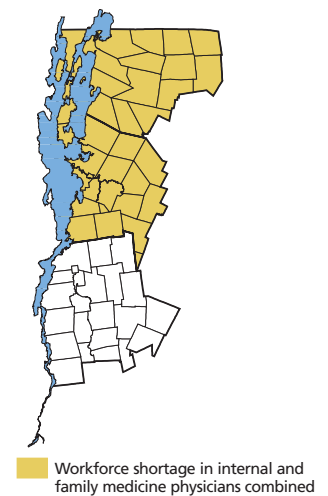
Primary Care Specialty	No. MD/DOs in FTEs* (2013)
Family Medicine	75
Internal Medicine	52
Obstetrics-Gynecology	36
Pediatrics	42

Supply to Benchmark in FTEs*

	2011	2012	2013
Family Medicine	-16	-15	-6
Internal Medicine	-17	-19	-18
Obstetrics-Gynecology	8	13	13
Pediatrics	17	18	15

* small discrepancies are due to rounding

workforce shortage



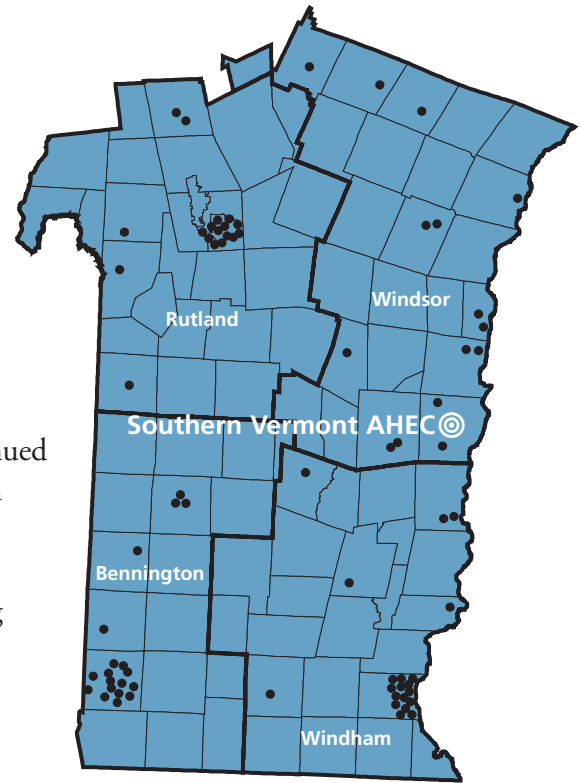
PCPs Limiting or Not Accepting New Patients

In 2013, 55% of family and internal medicine physicians and 29% of family and internal medicine APRNs and PA-Cs limited or closed their practice to new patients in this region.

Southern Vermont

Bennington, Rutland, Windham, and Windsor Counties

In 2013, there were 70 primary care practices (see adjacent map) in this four-county region of 197,762 Vermonters. The 161 primary care physicians and 85 APRNs, CNMs, and PA-Cs combined to yield a total primary care workforce of 246 individual practitioners.



● Primary Care Practice Site

Supply and Distribution by County (in FTEs)

In this region the greatest need for primary care physicians continued to be in Rutland and Windsor Counties, followed by Bennington County (see Table 6). There was an adequate supply of APRNs, CNMs, and PA-Cs in the region (see Table 7). Combining all primary care specialties, PCPs showed a lower percentage limiting or closing their practice to new patients from 2011 to 2013 (see Tables 8 & 9).

Supply and Distribution by Specialty (in FTEs)

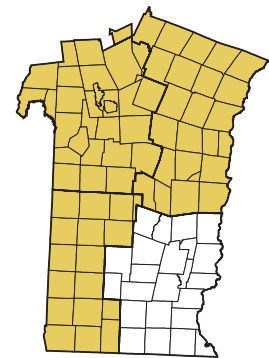
Examining primary care physicians by specialty, there were shortfalls in 2013, as in prior years, in the total supply of adult primary care physician FTEs combining family and internal medicine physicians (see Table 12). As illustrated on the small map below, Bennington, Rutland, and Windsor Counties had a shortfall of these physicians.

Table 12: Primary Care Physicians by Specialty

Primary Care Specialty	No. MD/DOs in FTEs* (2013)	Supply to Benchmark in FTEs*		
		2011	2012	2013
Family Medicine	72	5	7	8
Internal Medicine	30	-24	-26	-26
Obstetrics–Gynecology	17	-4	-0.5	-1
Pediatrics	28	4	7	7

* small discrepancies are due to rounding

■ workforce shortage



■ Workforce shortage in internal and family medicine physicians combined

PCPs Limiting or Not Accepting New Patients

In 2013, 46% of family and internal medicine physicians and 36% of family and internal medicine APRNs and PA-Cs limited or closed their practice to new patients in this region.

ENDNOTES

Primary Care Practice: An office or clinic which offered general primary care to adults and/or children, an ongoing relationship between a primary care practitioner (PCP) and the patient, comprehensive care, continuity of care, and coordination of care in family medicine, general internal medicine, general obstetrics-gynecology, and general pediatrics. Site may have included the patient's home for an "all home care" primary care practitioner.

Sites not included were: walk-in/immediate/acute care clinics, school-based clinics, free clinics, Planned Parenthood clinics, college health centers, Department of Corrections health facilities, sites for at-risk youth, sites for homeless people, nursing homes, residential assisted-living facilities, and Veterans Administration clinics.

Primary Care Practitioners: PCPs included physicians (MDs and DOs), advanced practice registered nurses (APRNs), certified nurse midwives (CNMs), and certified physician assistants (PA-Cs) at primary care practice sites.

Practice-Based Survey: Primary care administrators from all 215 primary care practices in Vermont were surveyed by AHEC in the spring/early summer of 2013, to update the prior year's list of PCPs and to report their current, typical, weekly office hours at the practice site. Per diem or other temporary PCPs were not included, if the practice was searching for a permanent practitioner.

Measuring the Primary Care Workforce: Measurement of the primary care workforce was guided by standards from the Graduate Medical Education National Advisory Committee (GMENAC) and the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services.

Calculating Physician Full-Time Equivalents (FTEs): One FTE was 40 hours per week. Using a method developed by HRSA² to measure physician shortage areas in geographic regions, physician in-office patient hours were adjusted to reflect additional time for: diagnosis, treatment, and clinical reports in the course of direct patient care; time spent outside of the office, at a hospital, nursing home, emergency department or care delivered in the patient's home. The amount of adjustment differed by primary care specialty (see Table 13). All calculations were extended to two decimal places (100ths place). No physician exceeded one FTE.

Table 13: HRSA Physician FTE Methodology

Primary Care Specialty	Office Hours	Adjustment Factor	Hours Per Week	Full-Time Equivalent
Family Medicine	#	x 1.4	÷ 40	= FTE
Internal Medicine	#	x 1.8	÷ 40	= FTE
Obstetrics-Gynecology	#	x 1.9	÷ 40	= FTE
Pediatrics	#	x 1.4	÷ 40	= FTE

Calculating APRN, CNM, and PA-C FTEs: One FTE was 40 hours per week. Weekly hours for each of these PCPs were divided by 40. All calculations were extended to two decimal places (100ths place). No practitioner exceeded one FTE.

Small Discrepancies Due to Rounding: While all FTE calculations were carried out to the hundredths place and then aggregated by discipline, region, and primary care specialty, the reader will find whole numbers in the charts. Often this created small discrepancies in column totals. These discrepancies are due to rounding up to whole numbers. For example, while $24.40+25.40+25.40+25.30 = 100.40$, in this report these aggregated numbers were presented as $24+25+25+25=100$.

Benchmark to Identify Adequacy and Shortage: AHEC used guidelines from GMENAC³ for the number of primary care physicians (in FTEs) per population⁴ for each primary care specialty:

Table 14: GMENAC Physician Recommendations

Family Medicine	32.5 FM physicians per 100,000
Internal Medicine	28.1 IM physicians per 100,000
Obstetrics-Gynecology	9.2 OB-GYN physicians per 100,000
Pediatrics	10.7 PED physicians per 100,000

Based on GMENAC assumptions of an additional three-tenths of an APRN/CNM/PA-C for every primary care physician, the Vermont Department of Health has considered it a shortage if there are fewer than one of these PCPs for every three primary care physicians, although service delivery models vary by region.

Shortages were defined as one or more practitioners below the benchmarks set forth by discipline, region, and primary care specialty.

Resource for National Statistics: Visit the National Center for Workforce for a broader context at <http://arf.hrsa.gov>

2. <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/medicaldentalhpsaguidelines.html>. Jan 2014.
 3. U.S. Department of Health and Human Services, Health Resources Administration: Report of the Graduate Medical Education National Advisory Committee (GMENAC) Vol. 1: Summary Report. DHHS Pub No. (HRA):81-651. U.S. Government Printing Office, Washington, D.C. 1980.
 4. <http://quickfacts.census.gov/qfd/states/50000.html>. Jan 2014.

Primary Care Survey

PRACTICE NAME _____ DATE OF COMPLETION _____

PHYSICAL TOWN OF PRACTICE _____

CONTACT PERSON _____ CONTACT EMAIL _____ CONTACT TELEPHONE _____

Practice Site Ownership: FQHC RHC Hospital-owned Private practice

Please include all MDs, DOs, APRNs, CNMs, and PA-Cs who see patients at your practice site. Indicate office hours, not including call, rounds or administrative time.

Practitioner Name	Degree/Certificate	Specialty	In-Office Patient Hours Per Week	Accepting New Patients?		
				Yes	No	Limited to:



Connecting students to careers, professionals to communities, and communities to better health.

For more information contact your regional AHEC or
Elizabeth Cote, Director
Elizabeth.Cote@uvm.edu
(802) 656-0030
www.vtahec.org