

The Vermont Primary Care Practitioner Workforce 2016 Snapshot



**A statewide workforce shortage
in adult primary care persists.**

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



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About Vermont AHEC

The Vermont Area Health Education Centers (AHEC) are a network of academic and community partners working together to improve the distribution, diversity, supply, and education of the health care workforce in Vermont. Vermont AHEC focuses on achieving a well-trained workforce so that all Vermonters have access to quality care, especially disadvantaged populations and those who live in Vermont's most rural and underserved areas. 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 The University of Vermont Medical Center; 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 education.

AHEC History & Partners

The Vermont Area Health Education Centers Program was established in 1996 by the Office of Primary Care at The Robert Larner, M.D. College of Medicine at The University of Vermont. AHEC is funded through multiple grants and contracts including: Federal HRSA Title VII, State of Vermont, Vermont Department of Health, The Robert Larner, M.D. College of Medicine at The University of Vermont, The University of Vermont Medical Center, Vermont's 13 community hospitals, private foundations, and individual contributors.

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

Acknowledgments

We thank all those involved in primary care in Vermont who helped produce this report, including the Vermont primary care practices who provided practice and practitioner-level information, the Champlain Valley AHEC team, the Southern Vermont AHEC team, the Northeastern Vermont AHEC team, and the UVM AHEC Program team.

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Vermont by County



Primary Care Workforce Summary 2016

Workforce Shortage in Adult Primary Care Persists

- In this report, practitioners include physicians (MDs, DOs), advanced practice registered nurses (APRNs), certified nurse midwives (CNMs), and certified physician assistants (PA-Cs) who work in family medicine, internal medicine, obstetrics-gynecology, and pediatric practice sites.
- Since 2013, the strongest growth was in family medicine whose practitioners care for both adults and children.
- In Vermont, during the three-year period of 2013 to 2016, the number of primary care practitioners grew; however, the shortage in adult primary care practitioners continued statewide.
- The need for primary care practitioners who care for adults was further demonstrated by the percentage of practitioners who limited or closed their practice to new patients.
- Since the 2013 report, the supply of physicians decreased while the supply of APRNs and PA-Cs increased.
- In some counties, a shortage of physicians is counter-balanced to some degree by its supply of APRNs and PA-Cs.

Primary Care Practitioners - Statewide Findings in 2016

Primary Care Practice Sites

In 2016, there were 195 primary care practice sites in Vermont, including family medicine, general internal medicine, general pediatrics, and general obstetrics-gynecology sites. (See Endnotes for AHEC criteria used to define primary care sites.)

Note: In 2013, there were 215 primary care practice sites in Vermont.

From Individual Practitioners to FTEs

For comparisons to national benchmarks, the count of individual Primary Care Practitioners (PCPs) (see “No. PCPs” in Table 1a), is converted to Full-Time Equivalents (FTEs) (see “No. in FTEs” in Table 1a) 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 teaching, administrative or research responsibilities, or may practice part-time for other reasons.

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 shortages are highlighted in the tables. (See Endnotes for details on the methods.)

Table 1a: All Primary Care Practitioners by Discipline

Discipline	No. PCPs (2013)	No. PCPs (2016)	No. FTEs* (2013)	No. FTEs* (2016)
PHYSICIANS (MDs/DOs)	559	520	492	458
APRNs, CNMs, PA-Cs (combined)	267	305	185	220
Advanced Practice Registered Nurses (APRNs)	150	186	101	133
Certified Nurse Midwives (CNMs)	34	32	21	20
Certified Physician Assistants (PA-Cs)	83	87	62	67

Supply to Benchmark FTEs*

2011	2012	2013	2016
-35	-20	-12	-46
-5	7	17	52

Table 1b: Total of Primary Care Practitioners Statewide

Discipline	No. PCPs (2013)	No. PCPs (2016)	No. FTEs* (2013)	No. FTEs* (2016)
PHYSICIANS (MDs/DOs)	559	520	492	458
APRNs, CNMs, PA-Cs (combined)	267	305	185	220
TOTAL STATEWIDE	826	825	677	678

Supply to Benchmark FTEs*

2011	2012	2013	2016
-35	-20	-12	-46
-5	7	17	52

Table 2: Primary Care Physicians by Specialty

Primary Care Specialty	No. PCPs (2013)	No. PCPs (2016)	No. MD/DOs in FTEs* (2013)	No. MD/DOs in FTEs* (2016)
Family Medicine	242	228	212	198
Internal Medicine	130	121	117	112
Obstetrics-Gynecology	78	64	71	60
Pediatrics	109	107	93	88
TOTAL STATEWIDE	559	520	492	458

Supply to Benchmark FTEs*

2011	2012	2013	2016
-6	-2	8	-5
-58	-60	-59	-64
6	13	13	3
24	29	26	21
-35	-20	-12	-46


*small discrepancies are due to rounding

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Table 3: Primary Care APRNs, CNMs, and PA-Cs by Specialty**Supply to Benchmark FTEs***

Primary Care Specialty	No. APRNs, CNMs, PA-Cs (2013)	No. APRNs, CNMs, PA-Cs (2016)	No. APRNs, CNMs, PA-Cs (combined) in FTEs* (2013)	No. APRNs, CNMs, PA-Cs (combined) in FTEs* (2016)	Supply to Benchmark FTEs*			
					2011	2012	2013	2016
Family Medicine	149	179	109	138	30	38	41	70
Internal Medicine	39	50	26	34	-34	-35	-33	-25
Obstetrics-Gynecology	51	48	31	30	6	10	12	11
Pediatrics	29	28	18	18	-6	-6	-4	-5
TOTAL STATEWIDE	267	305	185	220	-5	7	17	52

*small discrepancies are due to rounding

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Limiting New Patients by Specialty

Many practitioners have closed their practice to new patients or have limited accepting new patients.

Limitations included only accepting new patients if they live in the practice town or if a family member is already a patient at the practice.

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)	% MD/DOs (2016)
Family Medicine	51%	47%	47%	44%
Internal Medicine	68%	66%	63%	65%
Obstetrics-Gynecology	17%	15%	10%	9%
Pediatrics	12%	13%	14%	20%
TOTAL STATEWIDE	43%	40%	39%	40%

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)	% APRNs, CNMs, PA-Cs (2016)
Family Medicine	38%	32%	28%	25%
Internal Medicine	53%	61%	54%	44%
Obstetrics-Gynecology	14%	5%	4%	4%
Pediatrics	39%	7%	18%	18%
TOTAL STATEWIDE	36%	28%	26%	24%

Table 6: Primary Care Physicians by County

Specialty: Family Medicine

County	Population (est. 2015)	No. MD/DOs (2016)	No. MD/DOs in FTEs* (2016)	No. Recommended MD/DOs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	17	14	12	2
Bennington	36,317	15	14	12	2
Caledonia	30,780	12	10	10	0
Chittenden	161,382	58	45	52	-7
Essex	6,163	1	1	2	-1
Franklin	48,799	11	10	16	-6
Grand Isle	6,861	1	1	2	-1
Lamoille	25,235	16	15	8	7
Orange	28,899	8	7	9	-3
Orleans	27,100	7	6	9	-3
Rutland	59,736	19	17	19	-3
Washington	58,612	24	22	19	3
Windham	43,386	23	22	14	8
Windsor	55,737	16	15	18	-4
TOTAL STATEWIDE	626,042	228	198	203	-5

*small discrepancies are due to rounding

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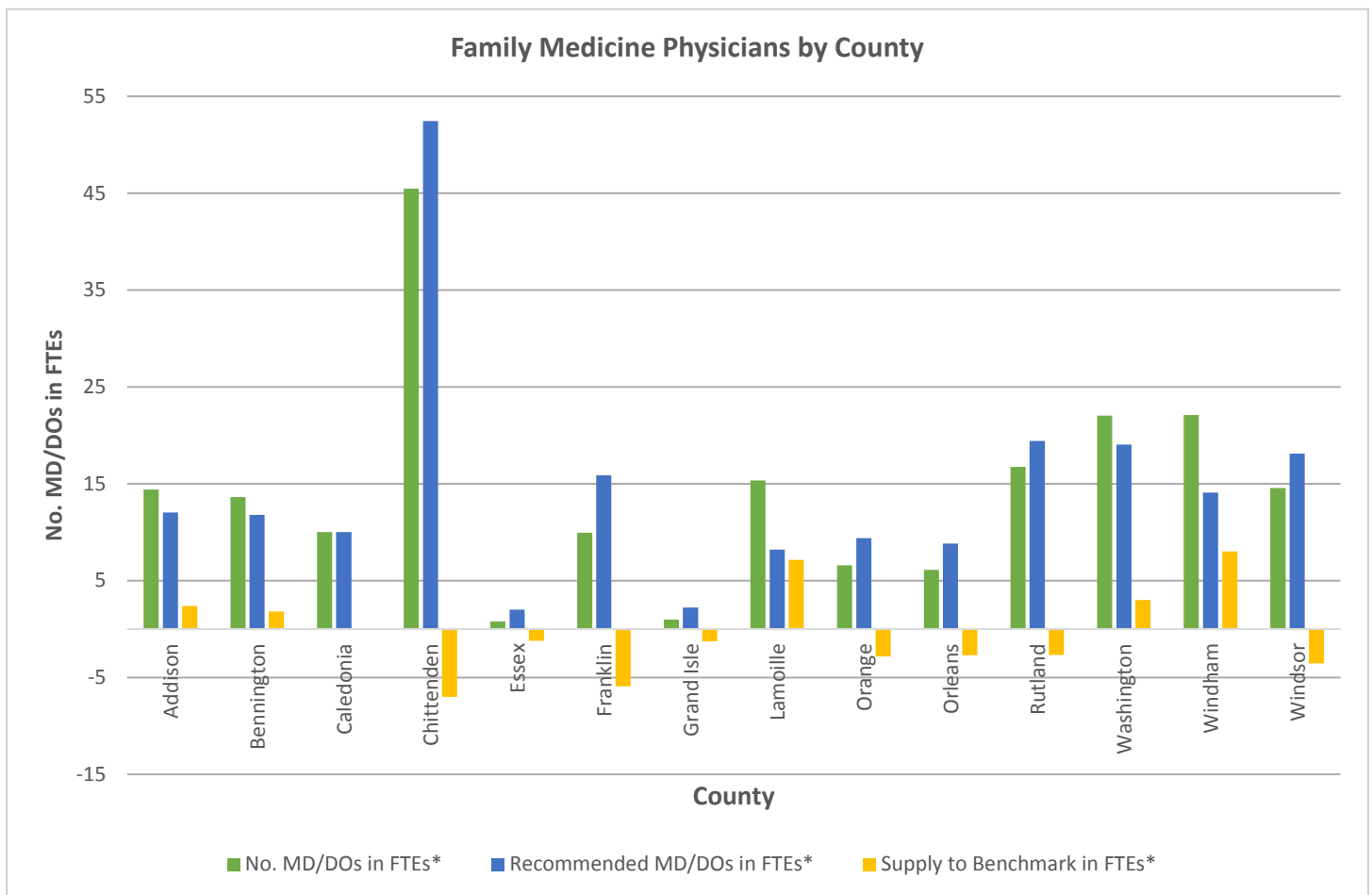


Table 7: Primary Care APRNs and PA-Cs by County

Specialty: Family Medicine

County	Population (est. 2015)	No. APRNs/PA-Cs (2016)	No. APRNs/PA-Cs in FTEs* (2016)	No. Recommended APRNs/PA-Cs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	3	2	4	-2
Bennington	36,317	9	8	4	4
Caledonia	30,780	11	8	3	4
Chittenden	161,382	39	27	17	10
Essex	6,163	2	1	1	1
Franklin	48,799	18	15	5	10
Grand Isle	6,861	2	1	1	0
Lamoille	25,235	6	5	3	2
Orange	28,899	6	5	3	2
Orleans	27,100	10	9	3	6
Rutland	59,736	28	22	7	16
Washington	58,612	18	13	6	7
Windham	43,386	9	7	5	3
Windsor	55,737	19	15	6	9
TOTAL STATEWIDE	626,042	179	138	68	70

*small discrepancies are due to rounding

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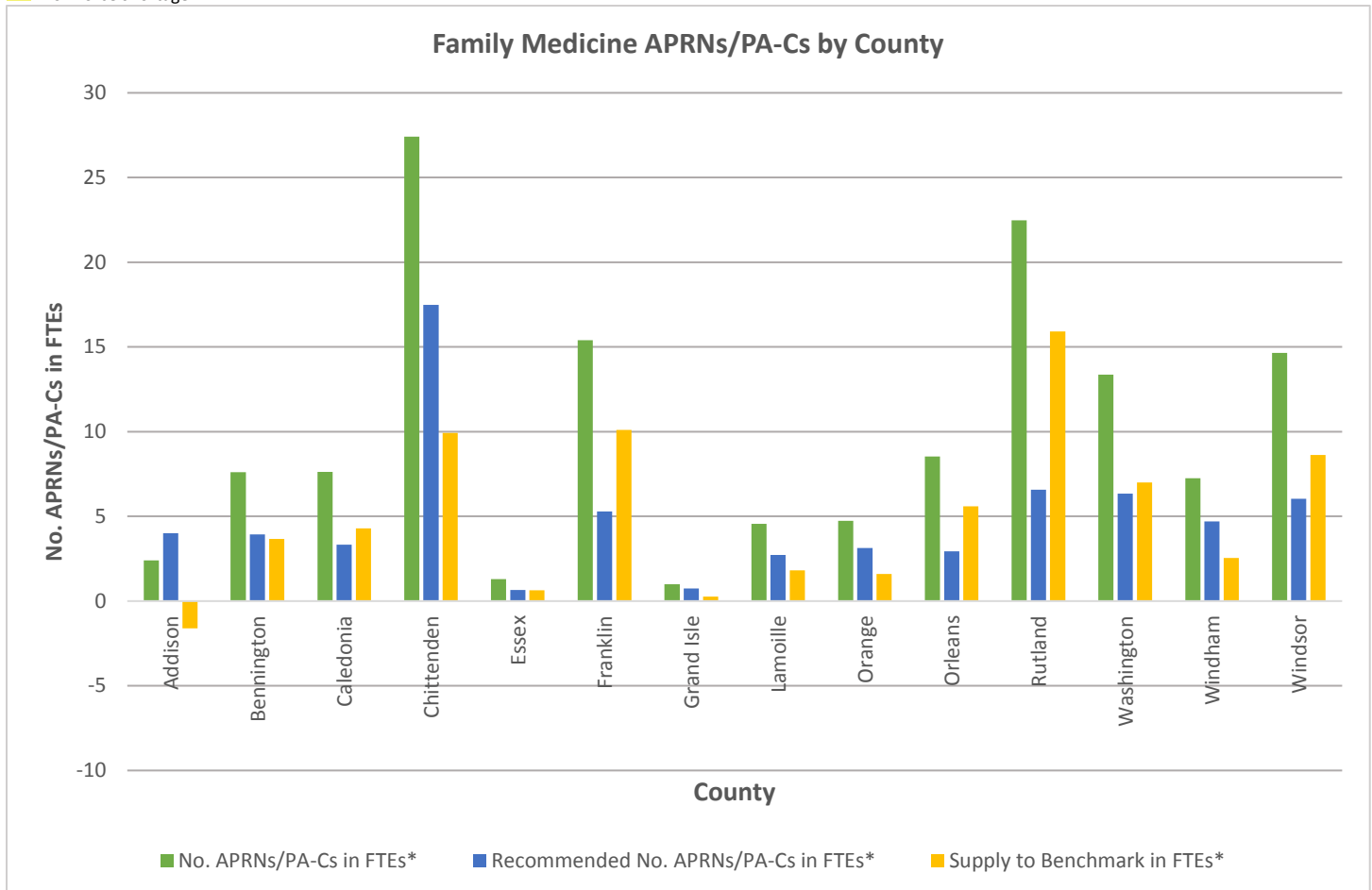


Table 8: Primary Care Physicians by County

Specialty: Internal Medicine

County	Population (est. 2015)	No. MD/DOs (2016)	No. MD/DOs in FTEs* (2016)	No. Recommended MD/DOs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	6	6	10	-5
Bennington	36,317	6	6	10	-4
Caledonia	30,780	7	7	9	-2
Chittenden	161,382	47	40	45	-5
Essex	6,163	1	1	2	-1
Franklin	48,799	6	5	14	-9
Grand Isle	6,861	0	0	2	-2
Lamoille	25,235	1	1	7	-6
Orange	28,899	4	4	8	-4
Orleans	27,100	7	7	8	-1
Rutland	59,736	10	10	17	-6
Washington	58,612	12	12	16	-5
Windham	43,386	5	5	12	-7
Windsor	55,737	9	9	16	-7
TOTAL STATEWIDE	626,042	121	112	176	-64

*small discrepancies are due to rounding

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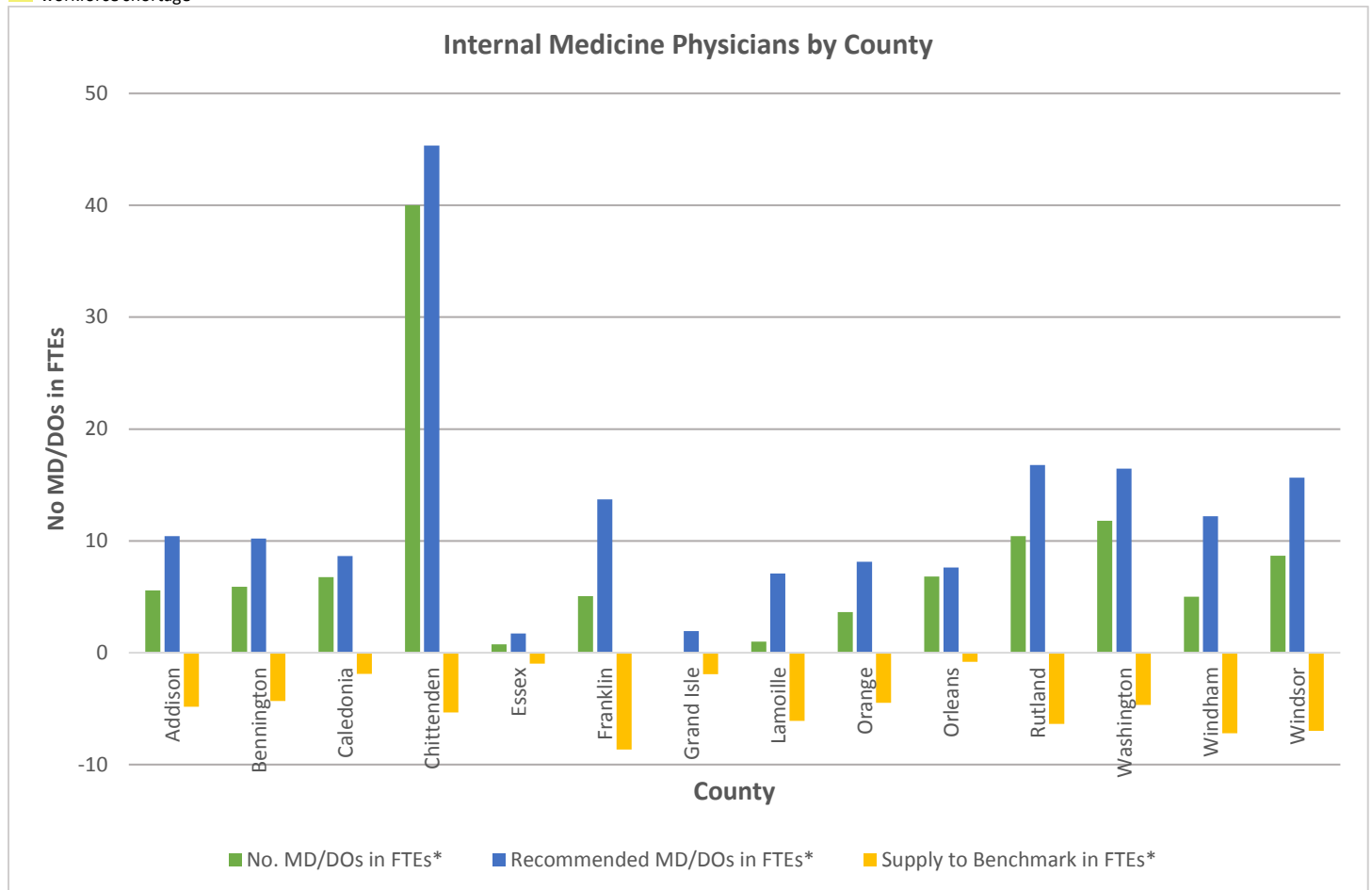


Table 9: Primary Care APRNs and PA-Cs by County

Specialty: Internal Medicine

County	Population (est. 2015)	No. APRNs/PA-Cs (2016)	No. APRNs/PA-Cs in FTEs* (2016)	No. Recommended APRNs/PA-Cs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	1	1	3	-3
Bennington	36,317	3	2	3	-1
Caledonia	30,780	4	3	3	0
Chittenden	161,382	16	10	15	-5
Essex	6,163	3	2	1	2
Franklin	48,799	3	1	5	-3
Grand Isle	6,861	0	0	1	-1
Lamoille	25,235	0	0	2	-2
Orange	28,899	1	0	3	-2
Orleans	27,100	1	1	3	-2
Rutland	59,736	0	0	6	-6
Washington	58,612	6	5	5	-1
Windham	43,386	6	4	4	0
Windsor	55,737	6	4	5	-1
TOTAL STATEWIDE	626,042	50	34	59	-25

*small discrepancies are due to rounding

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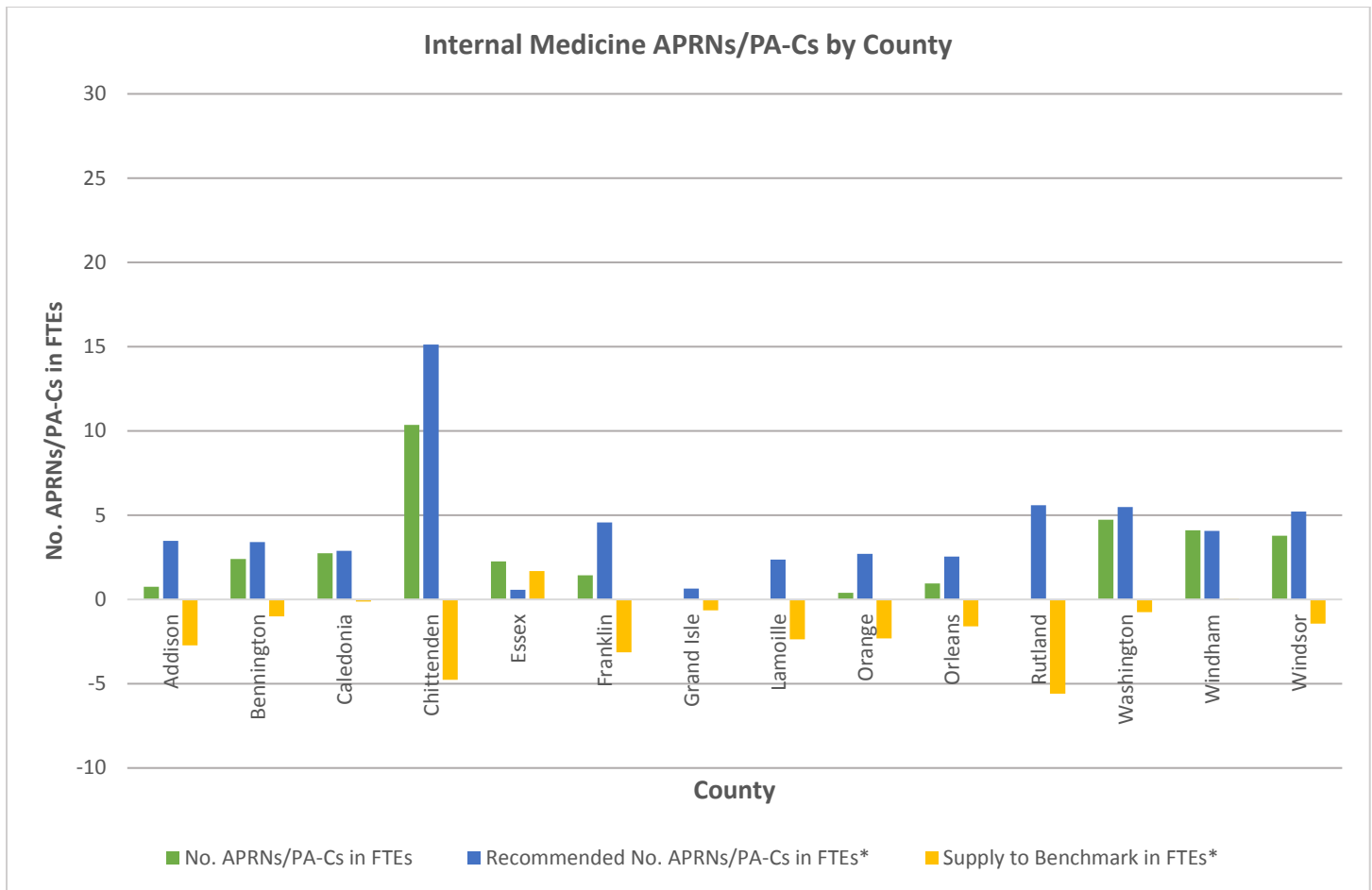


Table 10: Primary Care Physicians by County

Specialty: **Obstetrics-Gynecology**

County	Population (est. 2015)	No. MD/DOs (2016)	No. MD/DOs in FTEs* (2016)	No. Recommended MD/DOs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	3	3	3	0
Bennington	36,317	4	4	3	1
Caledonia	30,780	3	3	3	0
Chittenden	161,382	25	21	15	6
Essex	6,163	0	0	1	-1
Franklin	48,799	4	4	4	-1
Grand Isle	6,861	0	0	1	-1
Lamoille	25,235	2	2	2	0
Orange	28,899	4	4	3	1
Orleans	27,100	1	1	2	-1
Rutland	59,736	6	6	6	1
Washington	58,612	6	6	5	1
Windham	43,386	4	4	4	0
Windsor	55,737	2	2	5	-3
TOTAL STATEWIDE	626,042	64	60	58	3

*small discrepancies are due to rounding

■ workforce shortage

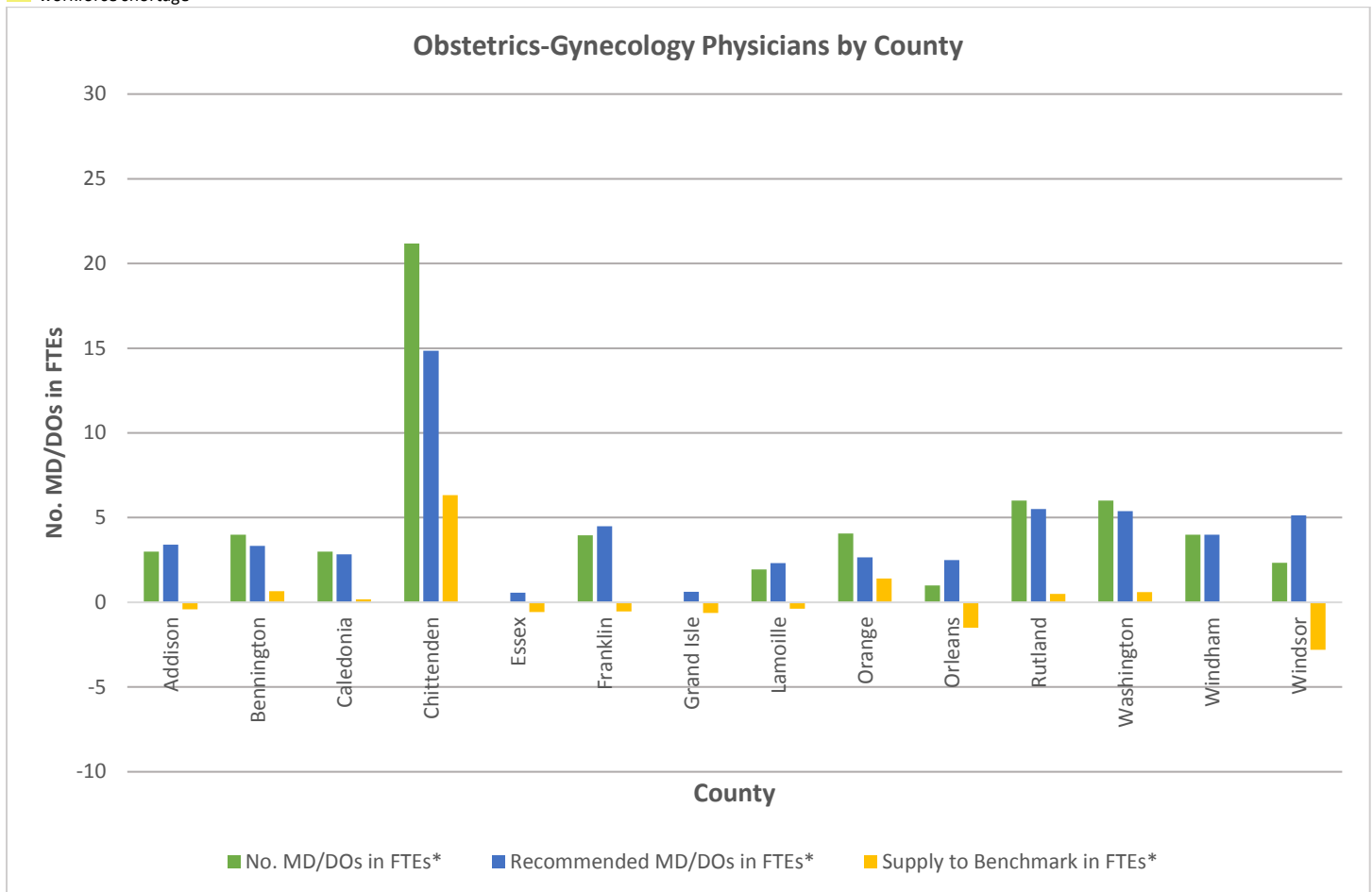


Table 11: Primary Care APRNs, CNMs, and PA-Cs by County

Specialty: **Obstetrics-Gynecology**

County	Population (est. 2015)	No. APRNs, CNMs, PA-Cs (2016)	No. APRNs, CNMs, PA-Cs in FTEs* (2016)	No. Recommended in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	3	2	1	1
Bennington	36,317	2	2	1	0
Caledonia	30,780	4	4	1	3
Chittenden	161,382	17	8	5	3
Essex	6,163	0	0	0	0
Franklin	48,799	1	1	1	-1
Grand Isle	6,861	0	0	0	0
Lamoille	25,235	4	2	1	2
Orange	28,899	2	1	1	0
Orleans	27,100	1	1	1	0
Rutland	59,736	1	1	2	-1
Washington	58,612	3	3	2	1
Windham	43,386	7	5	1	3
Windsor	55,737	3	2	2	0
TOTAL STATEWIDE	626,042	48	30	19	11

*small discrepancies are due to rounding

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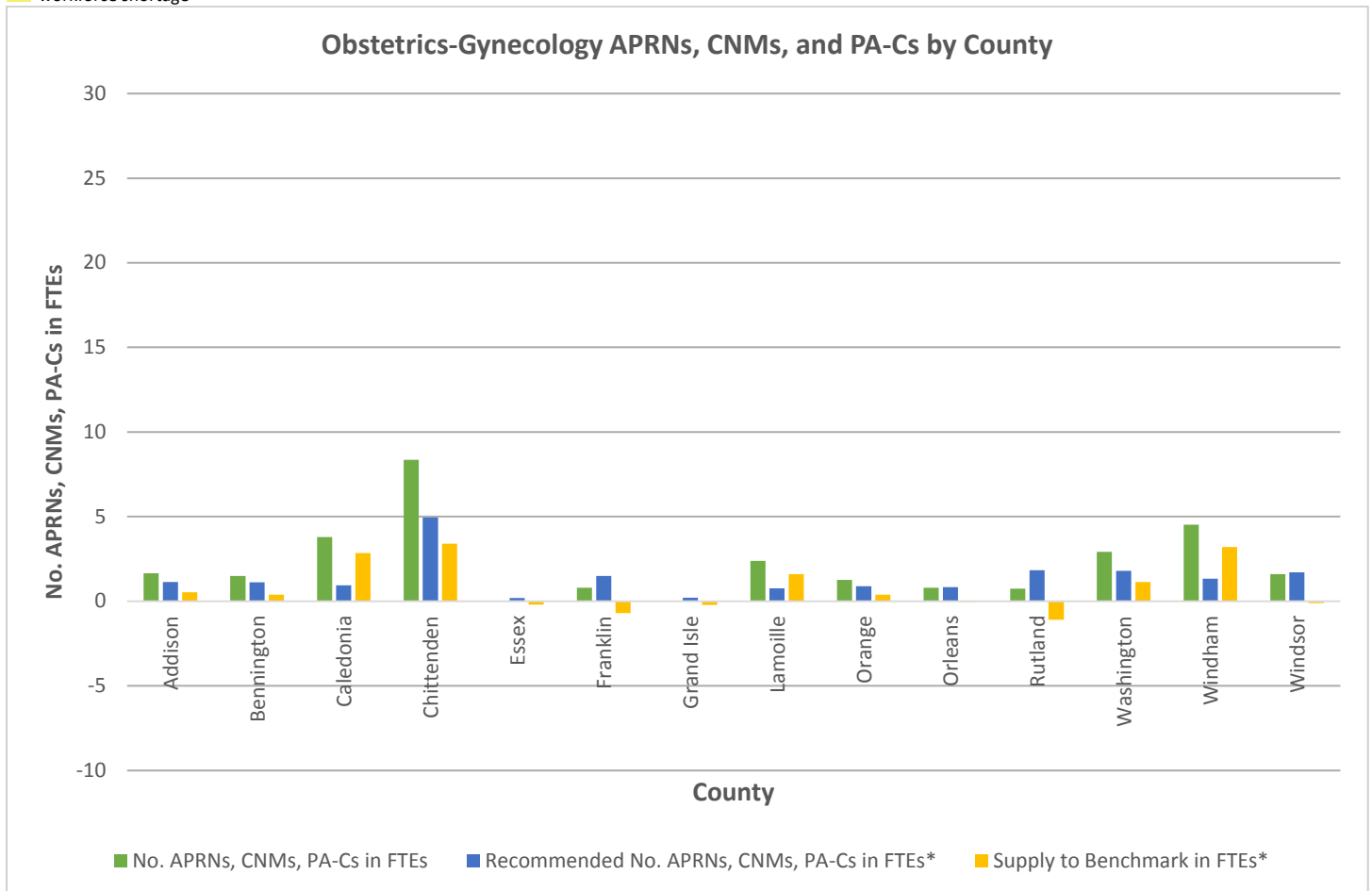


Table 12: Primary Care Physicians by County

Specialty: **Pediatrics**

County	Population (est. 2015)	No. MD/DOs (2016)	No. MD/DOs in FTEs* (2016)	No. Recommended MD/DOs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	7	5	4	1
Bennington	36,317	7	7	4	3
Caledonia	30,780	5	5	3	1
Chittenden	161,382	36	27	17	10
Essex	6,163	0	0	1	0
Franklin	48,799	8	7	5	2
Grand Isle	6,861	0	0	1	-1
Lamoille	25,235	2	2	3	-1
Orange	28,899	6	5	3	2
Orleans	27,100	2	2	3	-1
Rutland	59,736	9	7	6	1
Washington	58,612	6	6	6	0
Windham	43,386	10	8	5	3
Windsor	55,737	9	7	6	1
TOTAL STATEWIDE	626,042	107	88	67	21

*small discrepancies are due to rounding

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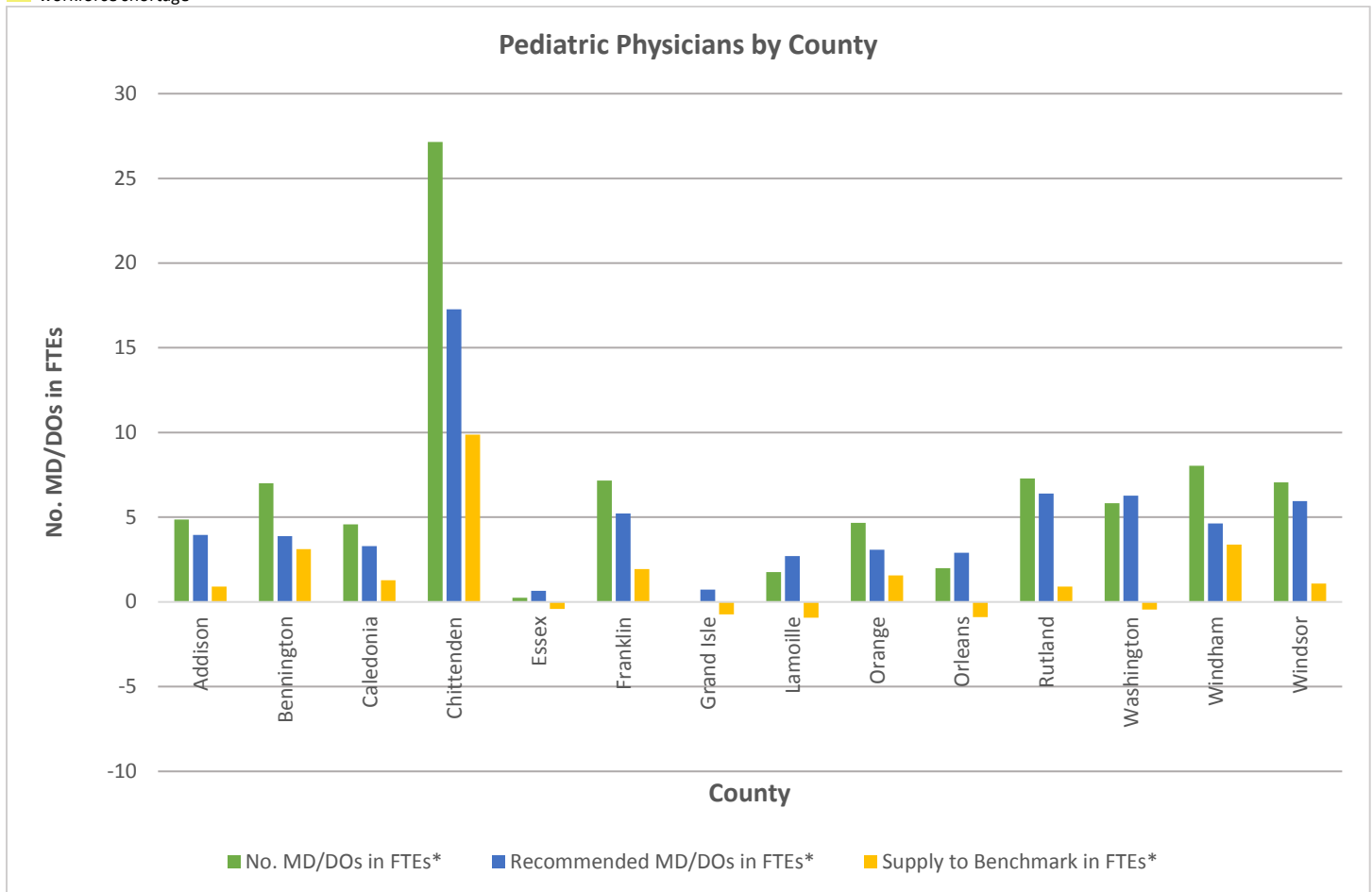


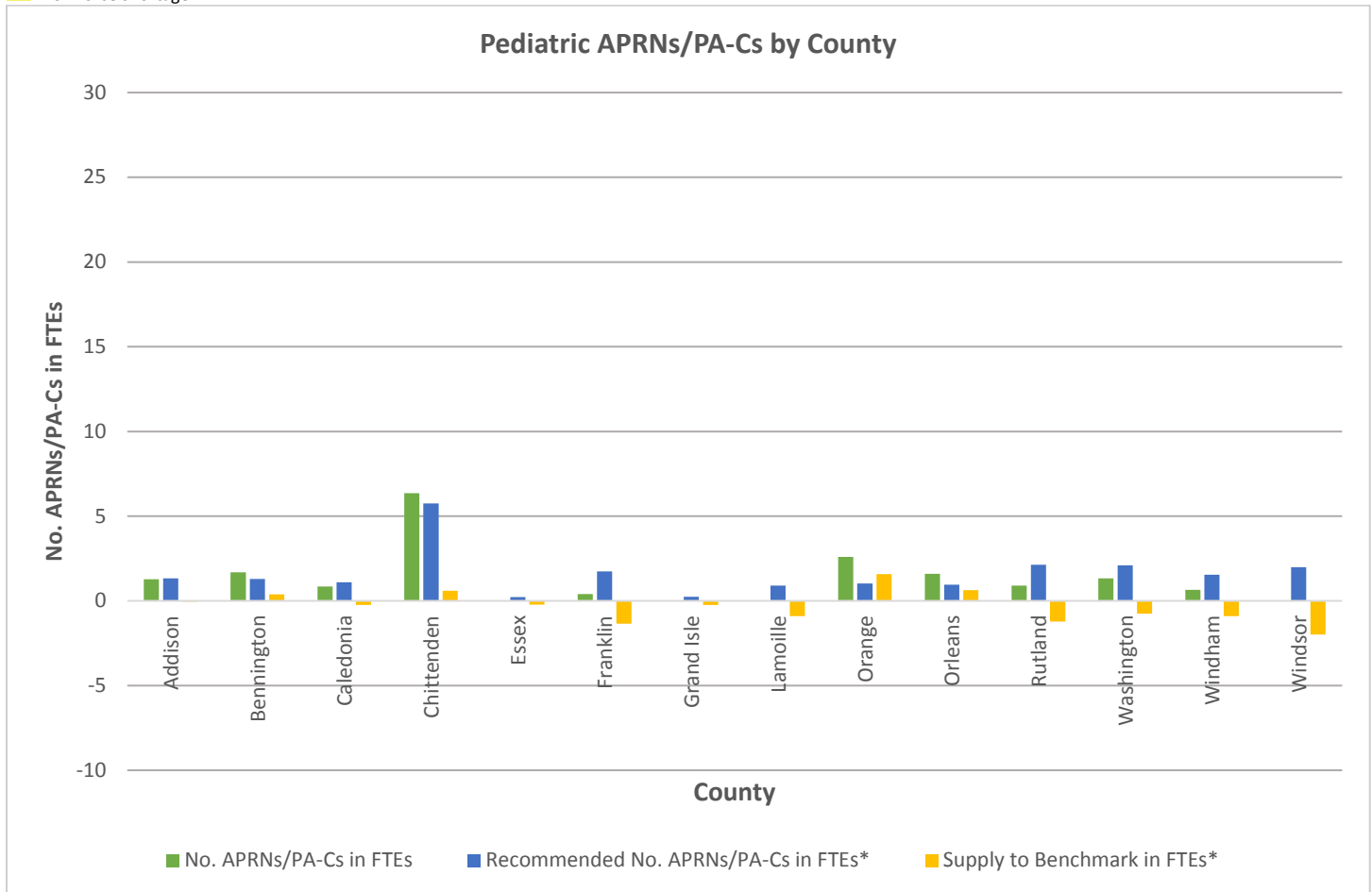
Table 13: Primary Care APRNs and PA-Cs by County

Specialty: **Pediatrics**

County	Population (est. 2015)	No. APRNs/PA-Cs (2016)	No. APRNs/PA-Cs in FTEs* (2016)	No. Recommended APRNs/PA-Cs in FTEs* (2016)	Supply to Benchmark in FTEs* (2016)
Addison	37,035	2	1	1	0
Bennington	36,317	2	2	1	0
Caledonia	30,780	2	1	1	0
Chittenden	161,382	10	6	6	1
Essex	6,163	0	0	0	0
Franklin	48,799	1	0	2	-1
Grand Isle	6,861	0	0	0	0
Lamoille	25,235	0	0	1	-1
Orange	28,899	5	3	1	2
Orleans	27,100	2	2	1	1
Rutland	59,736	1	1	2	-1
Washington	58,612	2	1	2	-1
Windham	43,386	1	1	2	-1
Windsor	55,737	0	0	2	-2
TOTAL STATEWIDE	626,042	28	18	22	-5

*small discrepancies are due to rounding

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ENDNOTES

Primary Care Practice: An office or clinic which offers 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 pediatric. Site may include patient's home for an "all home care" primary care practitioner.

Sites not included are: walk-in/immediate/acute urgent 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 include 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 195 primary care practices in Vermont were surveyed by AHEC in the spring/early summer of 2016. 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 is 40 hours per week. Using a method developed by HRSA¹ 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 14). All calculations were extended to two decimal places (100th place). No physician exceeded one FTE.

Table 14: 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 is 40 hours per week. Weekly hours for each of these PCPs were divided by 40. All calculations were extended to two decimal places (100th 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+25.40+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 GMENAC² for the number of primary care physicians (in FTEs) per population³ for each primary care specialty.

Table 15: 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 less than one of these PCPs for every three primary care physicians, although service and delivery models vary by region.

If a specialty was not indicated for an individual APRN/CNM/PA-C, the practice type was utilized to determine specialty.

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

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

Population Data: U.S. Census data (estimated 2015) was used for county and statewide populations.

¹ http://contentmanager.med.uvm.edu/docs/sdms_manual_/ahec-documents/sdms_manual_.pdf Jan 2017

² 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.

³ <https://www.census.gov/quickfacts/table/PST045215/00>. Nov 2016.



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