

# A Novel Gap Staffing Metric for Primary Care Provider Staffing and Implications for Urban and Rural Clinics

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## FINDINGS:

The Veterans Health Administration (VHA) has not been able to consistently determine Primary Care Provider (PCP) staffing gaps at a local or national level. The CRH Evaluation Team developed a metric to identify PCP staffing in rural and urban clinics.

## EVIDENCE:

The PCP "gap staffing metric" is the ratio of maximum clinic capacity divided by total patients assigned to a clinic, assuming a staffing ratio of 1 full-time equivalent (FTE) physician to 1,200 patients and 1 FTE advanced practice provider (APP) to 900 patients. Three gap staffing levels were determined: under- (<1.0), marginally- (1.0-1.2), and fully-staffed (>1.2).

## RESULTS:

All primary care patients (N=5,014,445) and PCP FTE (N=6,202) assigned to each clinic from VHA administrative data were obtained, October 2017 thru March 2021. In March 2021, out of 910 primary care clinics, 351 (38.6%) were marginally- or under-staffed, of which half (N=179) had ≥0.5 FTE gap. Fully staffing all clinics would require 228 to 521 FTE, depending on provider type and staffing level. Over the 3.5-year study period, clinics in rural areas, on average, experienced a gap staffing level <1.0 for 20.5% of months compared to 13.7% of months among urban clinics (p<0.001). Rural clinics were 7.6% more likely to be understaffed and experienced 32% greater cumulative time understaffed. This novel gap staffing metric suggests increasing PCP FTE by 3.7-8.4% would fully staff VHA primary care clinics nationwide.

**Table 1.** Percent of Months Fully Staffed for Primary Care Clinics Based on the Percent of Patients with a Rural Address and Clinic Geographic Location

Variable	Percent Rural by Patient Population			Facility Geographic Location		
	≥ 50% Rural Mean (SE)	< 50% Rural Mean (SE)	p-value	Rural Mean (SE)	Urban Mean (SE)	p-value
Clinic Sample Size	N=417	N=496		N=332	N=584	
<b>Percent of Months</b>						
Fully Staffed	55.7 (1.9)	50.7 (1.8)	0.056	54.8 (2.2)	52.1 (1.6)	0.32
Marginally Staffed	25.3 (1.4)	35.5 (1.5)	<0.001	24.7 (1.6)	34.2 (1.3)	<0.001
Understaffed	19.0 (1.5)	13.8 (1.1)	0.006	20.5 (1.7)	13.7 (1.0)	<0.001

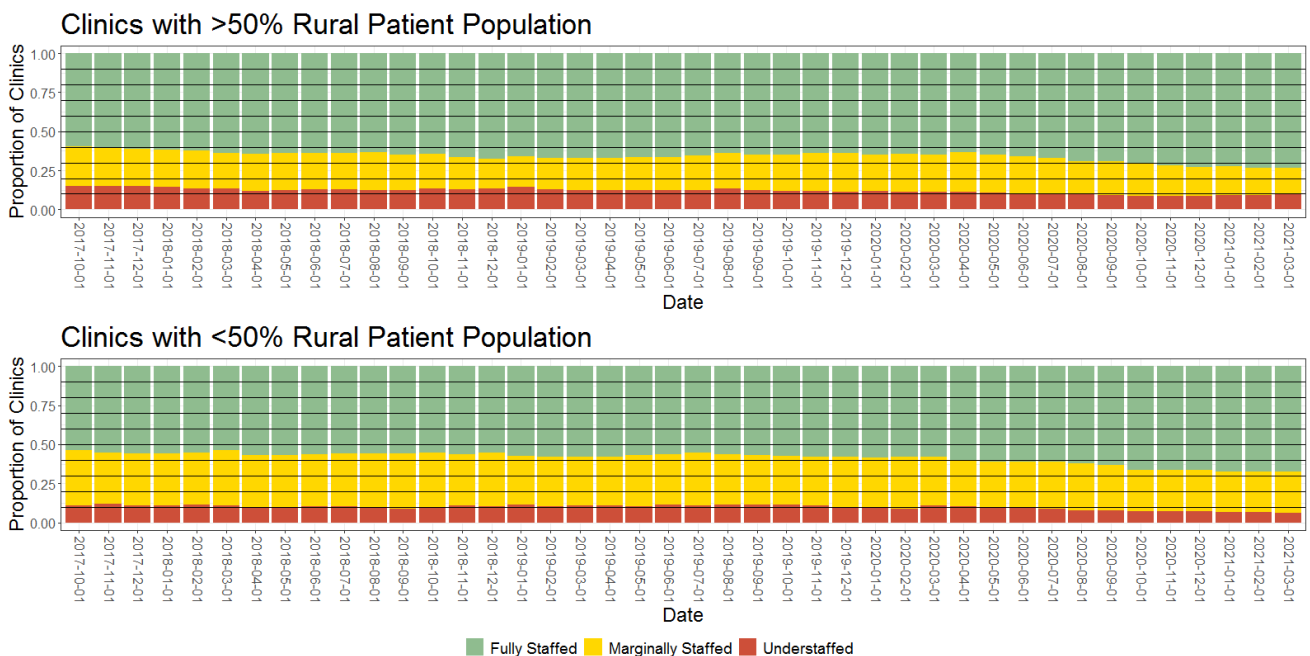
**Table 2.** Clinic Capacity, Assigned Patients, and Total Provider FTE by VISN in March 2021, including Number of Marginally- and Under-staffed Clinics and Number of Clinics Needing > 0.5 FTE of an Advanced Practice Provider

At the clinic-level, gaps in PCP staffing are evident. However, when considering available FTE relative to unique patients served at the VISN level, VISN level capacity is sufficient to care for all patients based on VHA panel size definitions. Quantifying both the deficits and excess FTE at the clinic-level may inform strategic workforce planning by identifying understaffed locations where hiring is needed, as well as overstaffed clinics whose FTE could potentially be redistributed to neighboring clinics

VISN	Max VISN Capacity	Patients Assigned to VISN	VISN Level Gap Staffing Metric Value	VISN Level Current Total FTE	VISN Level Current MD FTE	VISN Level Current APP FTE	VISN-Wide FTE "Gap" if MD	VISN-Wide FTE "Gap" if APP	# of Clinics understaffed (<1.2)	# Clinics Needing At Least a 0.5 APP FTE
TOTAL	6563334	5014445	1.31	6201.3	4756.7	1444.6	NA		351	179
1	306777	200842	1.53	274.9	220.2	54.8	No Gap at the VISN Level		6	3
2	291036	208050	1.40	282.1	224.4	57.7			26	5
4	309657	239288	1.29	274.5	193.8	80.6			23	13
5	244191	167082	1.46	219.4	185.6	33.7			6	2
6	356751	266422	1.34	397.1	322.7	74.4			11	6
7	431460	379040	1.14	405.7	316.5	89.2	18.9	25.3	35	24
8	557736	438584	1.27	567.3	504.8	62.5	No Gap at the VISN Level		24	15
9	293436	236633	1.24	256.6	181.4	75.2			25	12
10	487758	396765	1.23	464.3	340.7	123.6			30	16
12	297123	220689	1.35	274.1	192.3	81.8			13	3
15	273399	194212	1.41	258.0	176.1	81.9			13	4
16	432627	345199	1.25	389.7	291.2	98.5			30	14
17	427722	333809	1.28	402.0	326.2	75.8			19	10
19	323391	235584	1.37	320.3	228.2	92.1			15	8
20	301365	232617	1.30	284.1	199.5	84.6			14	8
21	380733	257869	1.48	343.5	274.5	69.0			10	4
22	522123	392284	1.33	490.3	364.4	126.0			26	17
23	326049	269476	1.21	297.4	214.2	83.2			25	15

**Figure 1. Break down of Fully-, Marginally-, and Understaffed Categorizations from October 2017 thru March 2021.** Clinic Rurality is defined by the percentage of unique patients assigned to a clinic as living in a rural location in fiscal year (FY) 2020

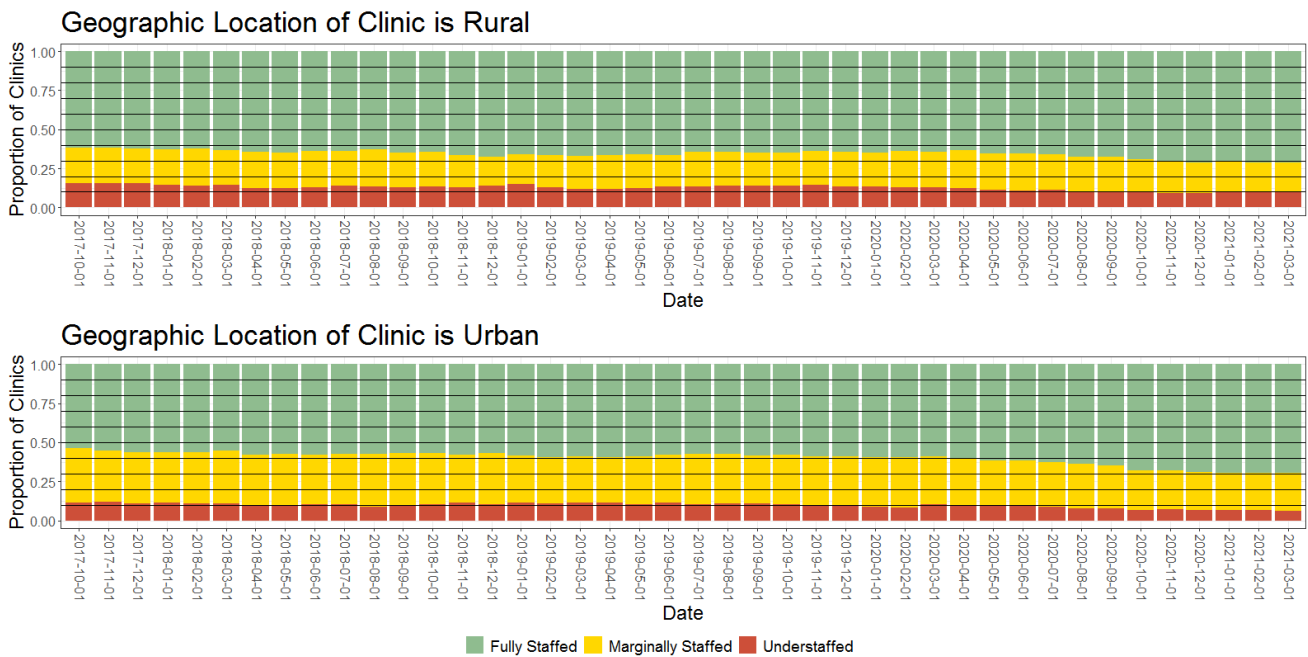
In both rural and urban settings based on a clinic’s patient population, the number of clinics that were fully staffed increased from October 2017 thru March 2021. However, rural clinics are more likely to be understaffed.



Gap Level	Urban Clinics: N (%)		Difference	Rural Clinics: N (%)		Difference
	October 2017	March 2021	Oct - Mar	October 2017	March 2021	Oct - Mar
Fully Staffed	251 (45.0)	358 (61.9)	+107	163 (50.3)	201 (60.5)	+38
Marginally Staffed	217 (38.9)	166 (28.7)	-51	82 (25.3)	72 (21.7)	-10
Understaffed	90 (16.1)	54 (9.3)	-36	79 (24.4)	59 (17.8)	-20

**Figure 2.** Break down of Fully-, Marginally-, and Understaffed Categorizations from October 2017 thru March 2021. Clinic Rurality is defined by the geographic location of the clinic based on RUCA classifications

In both rural and urban settings based on the geographic location of the clinic, the number of clinics that were fully staffed increased from October 2017 thru March 2021. However, rural clinics are more likely to be understaffed.



Gap Level	Urban Clinics: N (%)		Difference	Rural Clinics: N (%)		Difference
	October 2017	March 2021	Mar - Oct	October 2017	March 2021	Mar - Oct
Fully Staffed	215 (45.3)	292 (59.6)	+77	199 (48.9)	264 (63.3)	+65
Marginally Staffed	184 (38.7)	154 (31.4)	-30	115 (28.3)	84 (20.1)	-31
Understaffed	76 (16.0)	44 (9.0)	-32	93 (22.9)	69 (16.6)	-24

**Table 3. Clinics (N=37) Classified as Understaffed During the entire Study Period**

Over the 3.5-year study period at the 916 clinics, 37 (4%) were always understaffed from October 2017 thru March 2021. These clinics are listed below with clinic size and rurality.

Station Name	VISN	Clinic Size based on Unique Patients	Clinic Population More Than 50% Rural	Geographic Location of Clinic: Urban or Rural
CBOC 405HE: Keene , NH	1	Small	Yes	Rural
CBOC 436GA: Anaconda , MT	19	Medium	Yes	Rural
CBOC 501GC: Silver City , NM	22	Small	Yes	Rural
CBOC 528G3: Bainbridge , NY	2	Medium	Yes	Rural
CBOC 528GK: Lockport , NY	2	Medium	Yes	Rural
CBOC 528GV: Plattsburgh , NY	2	Medium	Yes	Rural
CBOC 529GB: New Castle , PA	4	Medium	Yes	Rural
CBOC 531GI: Mountain Home , ID	20	Small	Yes	Rural
CBOC 541GJ: New Philadelphia , OH	10	Medium	Yes	Rural
CBOC 548GF: Okeechobee , FL	8	Small	Yes	Rural
CBOC 554GG: La Junta , CO	19	Small	Yes	Rural
CBOC 565GD: Hamlet , NC	6	Medium	Yes	Rural
CBOC 580BZ: Lufkin , TX	16	Medium	Yes	Rural
CBOC 580GC: Galveston , TX	16	Small	Yes	Rural
CBOC 585GB: Rhinelander , WI	12	Medium	Yes	Rural
CBOC 590GC: Elizabeth City , NC	6	Medium	Yes	Rural
CBOC 612GJ: Yreka , CA	21	Small	Yes	Rural
CBOC 614GN: West Helena , AR	9	Small	Yes	Rural
CBOC 626GH: Cookeville , TN	9	Medium	Yes	Rural
CBOC 626GM: Columbia , TN	9	Medium	Yes	Rural
CBOC 635HB: Ardmore , OK	19	Medium	Yes	Rural
CBOC 648GD: Warrenton , OR	20	Medium	Yes	Rural
CBOC 674GB: Brownwood , TX	17	Medium	Yes	Rural
CBOC 508GG: Stockbridge , GA	7	Large	No	Urban
CBOC 520GA: Mobile , AL	16	Large	No	Urban
CBOC 548GA: Fort Pierce , FL	8	Small	No	Urban
CBOC 548GB: Delray Beach , FL	8	Large	No	Urban
CBOC 548GC: Stuart , FL	8	Medium	No	Urban
CBOC 548GD: Boca Raton , FL	8	Small	No	Urban
CBOC 619GF: Montgomery , AL	7	Medium	No	Urban
CBOC 629GA: Houma , LA	16	Medium	No	Urban
CBOC 629GD: Reserve , LA	16	Small	No	Urban
CBOC 640GA: Capitola , CA	21	Medium	No	Urban
CBOC 664GD: Escondido , CA	22	Medium	No	Urban
CBOC 740GC: Corpus Christi , TX	17	Medium	No	Urban
CBOC 626GC: Bowling Green , KY	9	Medium	Yes	Urban
CBOC 501GK: Sante Fe , NM	22	Medium	No	Urban

**Note:** Small <2,400, Medium = 2,400-10,000, Large > 10,000 patients

The analyses reported here were performed at the request of the Office of Primary Care.

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