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Facility-Level Changes in Receipt of Pharmacotherapy for Opioid Use Disorder: Implications for Implementation Science

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Abstract

Background: The U.S. is facing an opioid epidemic, but despite mandates for pharmacotherapy for opioid use disorder to be available at Veterans Health Administration (VHA) facilities, the majority of veterans with opioid use disorder do not receive these medications. In implementation research, facilities are often targeted for qualitative inquiry or quality improvement efforts based on quality measure performance during a one-year period. However, sites that experience quality performance changes from one year to the next may be highly informative because mechanisms that impact facility change may be more discoverable. The current study examined changes in receipt of pharmacotherapy for opioid use disorder in a national healthcare system to determine the extent to which sites fluctuated in performance over a two-year period and illustrate how changes in quality measures over time may be useful for implementation research and healthcare surveillance of quality measures.

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Methods: Using national VHA data from Fiscal Years (FY) 2016 and 2017, we calculated quality measure performance as the number of patients who received pharmacotherapy for opioid use disorder (i.e., methadone, buprenorphine, and naltrexone) divided by the number of patients with a current non-remitted opioid use disorder diagnosis for each FY at each facility (n=129) and examined change from FY16 to FY17.

Results: The mean rate of receipt of pharmacotherapy for opioid use disorder was 38% (facility range = 3% to 74%) in FY16 and 41% (facility range = 2% to 76%) in FY17. The average facility-level change in performance was 3% and ranged from -19% to 26%. There were 32 facilities that decreased in provision of pharmacotherapy, 12 facilities with no change, and 85 facilities that increased.

Conclusions: For facilities with average or high performance, it was difficult to maintain their performance over time. Identifying and learning from facilities with recent fluctuations may be more informative to guide the design of future quality improvement efforts than studying facilities with stable high or low performance.

Keywords

Opioid-related disorders; Pharmacotherapy; Methadone; Buprenorphine; United States
Department of Veterans Affairs; Implementation Science

1. Introduction

The United States is facing a major opioid epidemic with more than 42,000 people dying from opioid overdose deaths in 2016 (Seth, Scholl, Rudd, & Bacon, 2018). U.S. military veterans are also affected by this epidemic: There has been a 62% increase in veterans diagnosed with opioid use disorder at Veterans Health Administration (VHA) facilities between Fiscal Year (FY) 2004 (N = 30,093) (Oliva, Trafton, Harris, & Gordon, 2013) and FY12 (N=48,689) (Finlay et al., 2016) and rates of opioid overdose among veterans increased from 2001 to 2009 (Bohnert et al., 2014). Addressing the opioid crisis is a high priority for the Department of Veterans Affairs (VA) and the White House. Two medications, methadone and buprenorphine, are the most effective treatments for opioid use disorder (Amato et al., 2005; Amato, Minozzi, Davoli, & Vecchi, 2011; Kleber, 2008; Mattick, Breen, Kimber, & Davoli, 2009), and there is evidence to consider naltrexone as a second line medication (Department of Veterans Affairs & Department of Defense, 2015). These medications are mandated to be available and considered for all eligible veterans who receive care at the VHA medical facilities (Department of Veterans Affairs, 2008), but the majority of veterans with a current opioid use disorder do not receive these medications. The primary goal of this study was to examine changes in the quality measure of receipt of pharmacotherapy for opioid use disorder. Improving receipt is critical to address the opioid epidemic because these medications are effective at treating opioid use disorder and are mandated to be available at all VHA facilities.

Implementation scientists and quality improvement managers often investigate high and low performing facilities – positive and negative deviance studies (Rose & McCullough, 2017) – to learn about barriers and facilitators to access to and use of pharmacotherapy for opioid

use disorder. For example, a study of adoption of pharmacotherapy for alcohol use disorder in VHA facilities used facility-level quantitative data to select the 30 highest and lowest adopting facilities to invite to participate in a survey and follow-up interviews (Harris et al., 2013). High and low outlier anticoagulation clinics, which were 3 of the top and 3 of the bottom 10 performing sites in terms of anticoagulation control, were selected for qualitative inquiry in another study conducted in the VHA (Rose et al., 2012). However, positive and negative deviance approaches generally focus on one-year time periods, which may fail to elucidate the complex mechanisms that impact improvement or deterioration. Studying healthcare facilities that experience significant changes in quality performance from one year to the next may provide more comprehensive insights compared to studying facilities with stable high or low performance. As a secondary aim, we assess how measuring change in the quality metric of pharmacotherapy for opioid use disorder over more than one year would impact the selection of facilities for further investigation compared with traditional positive and negative deviance approaches. This “change” approach may have value for broader implementation research and healthcare surveillance of quality measures to ensure patients are receiving high quality care. Although applicable to any quality measure, pharmacotherapy for opioid use disorder is an optimal example for informing implementation research because the importance of treating opioid use disorder and the focus on improving access to these medications in the US.

1.1 Pharmacotherapy for Opioid Use Disorder Among Veterans

The VHA serves approximately 8 million veteran patients per year with over 50,000 patients diagnosed with a current opioid use disorder. At VHA, methadone, buprenorphine, and naltrexone are offered through licensed opioid treatment programs and buprenorphine and naltrexone are also provided in other clinical settings such as primary care. Despite the mandate to provide these medications, the provision of pharmacotherapy for opioid use disorder varies widely across VHA facilities nationally. In FY08, the rate of receipt of opioid pharmacotherapy treatment, defined as visiting a methadone clinic and/or filling a prescription for buprenorphine, among 35,240 veterans with opioid use disorder visiting VHA facilities ranged from 0% to 66% (Oliva, Harris, Trafton, & Gordon, 2012). The total number of patients diagnosed with opioid use disorder has increased over time as has the number of veterans receiving pharmacotherapy for opioid use disorder (Oliva et al., 2013). However, these studies did not examine facility-level changes in this quality measure over time. Studies that have examined barriers to and facilitators of pharmacotherapy for opioid use disorder, both within and outside the VA, have used nationally representative survey or telephone interviews (Aletraris, Edmond, Paino, Fields, & Roman, 2016; Knudsen, Abraham, & Oser, 2011), convenience samples (e.g., selected participant from a local area, surveyed conference participants) (Barry et al., 2009; Cunningham, Kunins, Roose, Elam, & Sohler, 2007; Friedmann et al., 2012), facilities with a high prevalence of patients with opioid use disorder (Gordon et al., 2011), and purposive sampling to represent a wide range of departments in two health care systems (Green et al., 2014). Although unique information may be drawn using these various methodologies, the results may reflect general beliefs rather than recent specific incidents or mechanisms that would explain how facilities improve or worsen on a quality measure.

1.2 Targeting Facilities for Implementation Science Efforts

Implementation science is the study of methods that improve the utilization of evidence-based treatments and policies in health care (Fogarty International Center, 2018). To inform the design and testing of strategies to improve provision of evidence-based practices, implementation scientists often undertake in-depth qualitative studies of the barriers and facilitators to high-quality treatment in low and high performing facilities (Gilmer, Katz, Stefancic, & Palinkas, 2013; Harris et al., 2013; Proctor et al., 2009; Rose et al., 2012). In these negative or positive deviance studies, low or high performing facilities are identified by using a single survey or time period (e.g., one FY period) to measure treatment quality. However, lessons learned from stable high-performing facilities may not provide the whole picture when designing strategies to help low-performing facilities improve. Facilities that have been stable in their performance metrics may not be informative of the mechanisms that influence change and could be utilized at other facilities. Quality measures that have changed from the prior year may give a signal of factors that may be influencing change, but the within-facility fluctuations in quality measures must be sufficiently large to suggest that informative on-the-ground activities are occurring. We use pharmacotherapy for opioid use disorder as a timely example of how change in a quality measure can be examined to identify facilities where mechanisms of change are in play and target these facilities for further inquiry.

1.3 Current Study

The primary aim of this study was to evaluate the magnitude of within-facility changes in an addiction treatment quality measure, pharmacotherapy for opioid use disorder, over a two-year period. We examined the proportion of patients who received pharmacotherapy for opioid use disorder in FY16 through FY17 at VHA facilities to determine whether the rate of receipt increased or decreased at facilities over time and the extent to which the rate of receipt changed. Such data can be used to target future investigations that elucidate the mechanisms of change in performance over time, and ultimately to design and test strategies to improve access and use of pharmacotherapy for opioid use disorder. The secondary aim of this study was to provide an illustrated example of how examining changes in a quality measure over time may be used to aid in healthcare quality surveillance. Although we used pharmacotherapy for opioid use disorder as the quality measure of interest, potentially any quality measure could be examined over longer time periods to provide a different picture of quality within a healthcare system.

2. Materials and Methods

2.1 Denominator Sample

We followed the American Society for Addiction Medicine's (ASAM) specifications for opioid use disorder diagnosis using International Classifications of Diseases –10th (ICD-10) Edition-CM codes (Harris, Weisner, et al., 2016). Using national VHA outpatient and inpatient clinical records, we identified veteran patients who received an opioid use disorder diagnosis during an outpatient visit or inpatient stay in FY16 (October 1, 2015 through September 30, 2016) and FY17 (October 1, 2016 through September 30, 2017). Opioid disorder diagnosis ICD-10 codes included F11.20, F11.10, F11.122, F11.222, F11.120,

F11.129, F11.229, F11.23, F11.99, F11.14, F11.188, F11.159, F11.150, F11.151, F11.181, F11.182, F11.19. Our sample was selected based on opioid abuse and opioid dependence diagnosis codes, included veterans with a new or reoccurring/stable diagnosis, and excluded veterans with an in-remission diagnosis. This study was approved by the Stanford University Institutional Review Board and the VA Palo Alto Research & Development Committee.

2.2 Numerator

Receipt of pharmacotherapy for opioid use disorder was calculated for each FY. Following version 2 of the ASAM specifications (Harris, Weisner, et al., 2016), patients who had at least one visit to a VA methadone clinic in their outpatient records and/or who filled at least one prescription for buprenorphine (i.e., Suboxone, Subutex, excluding patches and intravenous medications) or naltrexone (oral or injection) in their pharmacy records were counted as having received pharmacotherapy for opioid use disorder.

2.3 Analyses

We limited our analyses to facilities that had patients who were diagnosed with opioid use disorder during FY16 and FY17. For each of the remaining 129 facilities (out of 130, one facility did not have patients diagnosed with opioid use disorder in both FYs), we calculated quality measure performance as the number of patients who received pharmacotherapy for opioid use disorder divided by number of patients diagnosed with a non-remitted opioid use disorder. We calculated the overall average and range in receipt of pharmacotherapy for each FY. For each facility, we subtracted the FY16 rate of receipt from the FY17 rate of receipt to calculate the change in performance over the two FYs. We chose the absolute change in percent for the primary analyses but included relative change in percent in the supplemental appendix as it provides another useful view of the data. Facilities with a 1% or greater change from FY16 to FY17 were considered increasing facilities. Facilities with a 0% change were no change facilities, and facilities with a -1% change or greater were considered decreasing facilities. We examined the overall and facility-level distribution in change in performance over the two FYs.

3. Results

There were 52,763 veteran patients in FY16 and 54,078 veteran patients in FY17 who received a diagnosis of a non-remitted opioid use disorder. The number of patients per facility who were diagnosed with opioid use disorder ranged from 39 to 1,239 patients (mean [M] = 409, standard deviation [SD] = 261) in FY 2016 and from 32 to 1,218 patients (M = 419, SD = 267) in FY 2017. The change in the number of patients diagnosed with opioid use disorder from FY 2016 to FY 2017 ranged from -110 to 182 (M = 10, SD = 44). The proportion of change in denominators represented a 44% decrease to 83% increase in the number of patients diagnosed with opioid use disorder. In FY 2016, the overall rate of receipt of pharmacotherapy for opioid use disorder was 38% (n=20,028), with facility-level performance ranging from 3% to 74%. In FY17, the overall rate of receipt of pharmacotherapy for opioid use disorder was 41% (n=22,179), with facility-level performance ranging from 2% to 76%. At the facility-level, the change in receipt of pharmacotherapy for opioid use disorder from FY16 to FY17 averaged 3% and ranged from

–19% to 26%. In Figure 1, facilities were ordered from the lowest to highest rate of receipt of pharmacotherapy for opioid use disorder in FY16; the bars display their change from FY16 to FY17. Details on the number of patients diagnosed and treated and the percentage rate for each facility for FY16 and FY17 are reported in the supplemental appendix.

There were 32 facilities (25% of the total number of facilities in the study) that had a decrease in rates of receipt of pharmacotherapy, 12 facilities (9%) with no change, and 85 facilities (66%) with an increase. Among facilities that decreased, 21 facilities decreased 1–5%, 7 facilities decreased 6–9%, and 4 facilities decreased 11–19%. Among facilities that increased, 43 facilities increased 1–5%, 30 facilities increased 6–10%, and 12 facilities increased 11–26%. Table 1 displays the number of decreasing, no change, and increasing facilities by their FY16 rate of receipt, coded as low (<33% rate of receipt), average (33% to 43% rate of receipt; $\pm 5\%$ from the FY16 average), and high (>43%). The majority of decreasing facilities declined from a high rate of receipt, the majority of no change facilities were consistent in their low rate of receipt, and the majority of increasing facilities improved from a low rate of receipt.

4. Discussion

Nationally, the overall provision of pharmacotherapy for opioid use disorder at VHA facilities increased from 38% in FY16 to 41% in FY17 with two-thirds of facilities experiencing an increase over the two-year period. There were wide variations in the number of patients at each facility diagnosed with opioid use disorder, the facility-level provision of pharmacotherapy, and the change in provision of pharmacotherapy. Our results were consistent with prior research that has documented wide variability in receipt of pharmacotherapy for opioid use disorder (Oliva et al., 2012) and that the number of VHA patients diagnosed with opioid use disorder and receive pharmacotherapy has increased over time (Oliva et al., 2013). From a clinical or public health perspective, it is encouraging that two-thirds of facilities in a national healthcare system had an increase in provision of pharmacotherapy for opioid use disorder from FY16 to FY17. Of the 32 facilities that had a decrease in the receipt, 16 were facilities that started from an above average rate of receipt. Out of 12 facilities with no change, only 4 average- and 3 high-performing facilities maintained their FY16 rate of receipt in FY17. These results suggest that it is difficult for facilities to maintain average or high levels of performance, even over a relatively short period of two years.

From an implementation science standpoint, we identified facilities that experienced significant recent change in performance. We found 12 facilities that improved more than 10% and 4 facilities that experienced decreases in performance over 10% in absolute terms. Future investigation into the mechanisms driving changes at these facilities, such as through qualitative interviews with key informants, may provide valuable insights for implementation strategy design. There may be other cut points, such as a 5% or greater absolute change, that would be useful in identifying facilities to target for further investigation.

In addition to using recent change in performance as a criterion for selecting facilities for in-depth examination of barriers and facilitators, recent change might be a useful factor to consider in selecting the target facilities for intervention or to examine as a moderator of change. Within the VA healthcare system, there is no target goal or agreed upon percentage of patients with opioid use disorder who should receive pharmacotherapy for opioid use disorder. However, the VA generally monitors performance measures and targets the lower end of the distribution for quality improvement efforts. We expect that facilities with initial low performance and the most improvement will provide the most valuable information to teams developing interventions for other low performers. For example, in designing an intervention to improve quality measure performance among facilities that currently provide pharmacotherapy to fewer than 10% of their opioid use disorder patients, we would seek to learn from facilities that improved substantially from a similarly low baseline (e.g., 7% to 28%). A facility that improved a similar amount from a higher baseline (e.g., 29% to 54%) might not generalize as well to the target facilities.

Facilities that recently experienced a deterioration in performance may also provide unique information on whether preventive efforts should be enacted at high performing facilities to help maintain high quality care. Additional years of data would be needed to determine if declines in performance are temporary or signal a persistent problem. Depending on the priorities of the healthcare system, there are several temporal ways to examine pharmacotherapy for opioid use disorder, and by extension any quality measure, that could inform stakeholders about the quality of care in their facilities or healthcare systems.

It is also worth noting that change in performance can be driven by changes in a facility's numerator or denominator. We were primarily interested in learning from initially low performing facilities that increase the number of patients with opioid use disorder who were treated - in other words, numerator expansion. However, some of the facilities with apparently positive changes may have achieved this status by diagnosing fewer patients, also called denominator contraction (Harris, Chen, et al., 2016). The quality measure we selected, pharmacotherapy for opioid use disorder, is a diagnosis based measure and is susceptible to denominator management (Bradley et al., 2013; Harris, Chen, et al., 2016). Providers can improve on this measure by diagnosing fewer patients with opioid use disorder. Although there are proposed solutions to this problem, such as facility population based or epidemiologically-derived denominators (Harris, Rubinsky, & Hoggatt, 2015), it is beyond the scope of this study to examine such alternatives. However, the data presented in the supplemental appendix is necessary to distinguish these very different signals.

4.1 Limitations

The unique contributions of this study are to examine change in pharmacotherapy for opioid use disorder by facility over a two-year period and introduce the concept of monitoring changes in quality measures over multiple years to the implementation science literature. Despite these strengths, there are a few limitations to our study. First, we focused on the absolute percent change from FY16 to FY17, but the relative rate of change or changes in the absolute number of veterans who received pharmacotherapy for opioid use disorder at a given facility could yield different results. For facilities that serve a large number of patients,

small increases in percent change can reflect a substantial number of patients who start to receive medications – however, absolute rate of change does not inform us of the increase of the absolute number of patients who start to receive medications. Examining the data in these various ways may be useful for healthcare surveillance purposes. Also, there may have been changes within the VHA system or broader political or social changes that may have influenced facility-level changes. Although there was (and continues to be) increasing emphasis in the U.S. and within the Veterans Health Administration to address opioid use disorder, if this change had an impact on treatment use we would expect receipt of pharmacotherapy for opioid use disorder to improve more uniformly across the health care system. Instead, we observed variation across facilities in both years suggesting that changes were occurring at the local level.

4.2 Conclusions

By examining a quality measure over a two-year period, we found that out of 129 facilities, there were 53 facilities with a 6% or greater positive or negative change in receipt of pharmacotherapy for opioid use disorder from FY16 to FY17. For facilities with average or high performance, it was difficult to maintain their performance over time. These results suggest that using multi-year snapshots of quality measures may be a more effective way to select facilities for in-depth qualitative work. Facilities with initially low performance that improve substantially may yield the most useful information as to mechanisms of change, whereas facilities that experience deterioration may provide unique information for facilities on how to protect high performance rates. In addition, monitoring changes in quality measures over time may have utility for healthcare surveillance purposes.

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Appendix

Number of Veterans Diagnosed with Opioid Use Disorder, Number who Received Pharmacotherapy for Opioid Use Disorder, and Percent Treated at Veterans Health Administration Facilities in Fiscal Years 2016 to 2017

	FY2016			FY2017			Change from FY2016 to FY2017	
Smallest Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
1	39	13	33%	51	8	16%	–18%	–53%

	FY2016			FY2017			Change from FY2016 to FY2017	
Smallest Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
2	42	3	7%	32	9	28%	21%	294%
3	48	16	33%	65	26	40%	7%	20%
4	58	21	36%	106	21	20%	-16%	-45%
5	77	27	35%	55	16	29%	-6%	-17%
6	87	7	8%	110	8	7%	-1%	-10%
7	97	9	9%	79	25	32%	22%	241%
8	100	5	5%	83	10	12%	7%	141%
9	104	45	43%	99	52	53%	9%	21%
10	107	38	36%	97	34	35%	0%	-1%
11	110	36	33%	94	35	37%	5%	14%
12	122	34	28%	133	48	36%	8%	30%
13	124	13	10%	156	42	27%	16%	157%
14	127	83	65%	135	63	47%	-19%	-29%
15	132	35	27%	126	20	16%	-11%	-40%
16	133	34	26%	113	19	17%	-9%	-34%
17	135	51	38%	120	47	39%	1%	4%
18	137	45	33%	124	50	40%	7%	23%
19	141	14	10%	150	17	11%	1%	14%
20	142	36	25%	131	43	33%	7%	29%
21	143	27	19%	187	52	28%	9%	47%
22	146	18	12%	136	37	27%	15%	121%
23	148	64	43%	142	64	45%	2%	4%
24	148	43	29%	155	74	48%	19%	64%
25	149	98	66%	182	112	62%	-4%	-6%
26	157	48	31%	154	66	43%	12%	40%
27	180	37	21%	245	62	25%	5%	23%
28	184	90	49%	182	104	57%	8%	17%
29	184	45	24%	183	65	36%	11%	45%
30	195	114	58%	207	117	57%	-2%	-3%
31	198	42	21%	183	55	30%	9%	42%
32	209	72	34%	210	82	39%	5%	13%
	FY2016			FY2017			Change from FY2016 to FY2017	
Second Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
33	212	94	44%	208	94	45%	1%	2%
34	215	29	13%	259	36	14%	0%	3%

	FY2016			FY2017			Change from FY2016 to FY2017	
Smallest Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
35	217	30	14%	218	30	14%	0%	0%
36	225	123	55%	245	127	52%	-3%	-5%
37	227	98	43%	253	110	43%	0%	1%
38	232	8	3%	131	16	12%	9%	254%
39	239	84	35%	263	95	36%	1%	3%
40	241	121	50%	238	125	53%	2%	5%
41	243	9	4%	248	5	2%	-2%	-46%
42	246	71	29%	269	85	32%	3%	9%
43	251	51	20%	244	69	28%	8%	39%
44	252	72	29%	235	128	54%	26%	91%
45	253	39	15%	283	50	18%	2%	15%
46	256	80	31%	277	97	35%	4%	12%
47	257	103	40%	244	87	36%	-4%	-11%
48	261	154	59%	269	138	51%	-8%	-13%
49	262	118	45%	240	117	49%	4%	8%
50	267	116	43%	346	136	39%	-4%	-10%
51	283	96	34%	297	93	31%	-3%	-8%
52	285	11	4%	228	5	2%	-2%	-43%
53	286	81	28%	318	105	33%	5%	17%
54	287	76	26%	314	102	32%	6%	23%
55	288	212	74%	308	233	76%	2%	3%
56	298	113	38%	271	110	41%	3%	7%
57	300	65	22%	261	83	32%	10%	47%
58	306	53	17%	302	83	27%	10%	59%
59	313	62	20%	362	98	27%	7%	37%
60	325	81	25%	317	87	27%	3%	10%
61	350	95	27%	405	107	26%	-1%	-3%
62	357	140	39%	444	261	59%	20%	50%
63	358	170	47%	310	162	52%	5%	10%
64	377	214	57%	360	253	70%	14%	24%
	FY2016			FY2017			Change from FY2016 to FY2017	
Third Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
65	378	114	30%	367	144	39%	9%	30%
66	380	192	51%	399	189	47%	-3%	-6%
67	392	97	25%	334	82	25%	0%	-1%

	FY2016			FY2017			Change from FY2016 to FY2017	
Smallest Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
68	394	99	25%	413	131	32%	7%	26%
69	397	176	44%	380	185	49%	4%	10%
70	398	142	36%	405	142	35%	-1%	-2%
71	399	199	50%	406	170	42%	-8%	-16%
72	404	89	22%	431	98	23%	1%	3%
73	404	204	50%	541	329	61%	10%	20%
74	411	116	28%	418	125	30%	2%	6%
75	416	171	41%	416	171	41%	0%	0%
76	416	194	47%	437	203	46%	0%	0%
77	425	76	18%	408	164	40%	22%	125%
78	433	121	28%	438	124	28%	0%	1%
79	433	191	44%	487	197	40%	-4%	-8%
80	434	138	32%	433	140	32%	1%	2%
81	439	135	31%	520	129	25%	-6%	-19%
82	445	73	16%	426	88	21%	4%	26%
83	445	269	60%	449	236	53%	-8%	-13%
84	457	250	55%	520	292	56%	1%	3%
85	461	122	26%	429	132	31%	4%	16%
86	465	205	44%	487	227	47%	3%	6%
87	476	108	23%	483	98	20%	-2%	-11%
88	481	153	32%	523	169	32%	1%	2%
89	484	243	50%	544	251	46%	-4%	-8%
90	487	115	24%	491	120	24%	1%	3%
91	491	226	46%	508	251	49%	3%	7%
92	507	156	31%	558	190	34%	3%	11%
93	517	126	24%	502	151	30%	6%	23%
94	518	94	18%	484	93	19%	1%	6%
95	522	96	18%	527	111	21%	3%	15%
96	525	214	41%	649	289	45%	4%	9%
	FY2016			FY2017			Change from FY2016 to FY2017	
Largest Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
97	532	238	45%	553	249	45%	0%	1%
98	571	139	24%	627	167	27%	2%	9%
99	598	180	30%	684	245	36%	6%	19%
100	605	180	30%	602	229	38%	8%	28%

	FY2016			FY2017			Change from FY2016 to FY2017	
Smallest Quartile Facilities	Veterans with OUD	Received pharm. for OUD	Percent treated	Veterans with OUD	Received pharm. for OUD	Percent treated	Absolute	Relative
101	610	187	31%	635	218	34%	4%	12%
102	613	225	37%	638	255	40%	3%	9%
103	626	187	30%	516	205	40%	10%	33%
104	627	212	34%	597	190	32%	-2%	-6%
105	630	224	36%	673	301	45%	9%	26%
106	655	157	24%	728	243	33%	9%	39%
107	674	213	32%	643	257	40%	8%	26%
108	677	297	44%	700	316	45%	1%	3%
109	685	462	67%	744	432	58%	-9%	-14%
110	688	261	38%	656	264	40%	2%	6%
111	701	299	43%	656	294	45%	2%	5%
112	738	309	42%	881	372	42%	0%	1%
113	748	433	58%	798	457	57%	-1%	-1%
114	749	183	24%	931	226	24%	0%	-1%
115	764	336	44%	774	362	47%	3%	6%
116	769	360	47%	711	330	46%	0%	-1%
117	829	466	56%	809	510	63%	7%	12%
118	835	430	51%	747	392	52%	1%	2%
119	848	224	26%	868	261	30%	4%	14%
120	853	523	61%	892	515	58%	-4%	-6%
121	881	527	60%	911	534	59%	-1%	-2%
122	914	463	51%	913	483	53%	2%	4%
123	938	281	30%	842	304	36%	6%	21%
124	946	559	59%	931	531	57%	-2%	-3%
125	964	542	56%	921	588	64%	8%	14%
126	1013	370	37%	1001	508	51%	14%	39%
127	1040	660	63%	1159	698	60%	-3%	-5%
128	1097	487	44%	1114	562	50%	6%	14%
129	1239	378	31%	1218	450	37%	6%	21%

Note. Table was grouped in quartiles based on the facility-level number of veterans who were diagnosed with OUD in FY2016. FY = Fiscal Year. OUD = opioid use disorder.

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Figure 1.

Facilities are ordered by Fiscal Year (FY) 2016, lowest to highest rate of receipt in pharmacotherapy for opioid use disorder. The bars display the change in rate of receipt from FY 2016 to FY 2017, with unfilled bars indicating a positive change and filled bars indicating a negative change.

Table 1

Change in Provision of Pharmacotherapy for Opioid Use Disorder From Fiscal Years 2016 to 2017 at Veterans Health Administration Facilities

Facility Change from FY16 to FY17	Fiscal Year 2016 Facility Rate			Total
	Low (<33%)	Average (33% to 43%)	High (>43%)	
Decreasing	8	8	16	32
–11% to –19%	1	2	1	4
–6 to –10%	2	1	4	7
–1 to –5%	5	5	11	21
No Change (0%)	5	4	3	12
Increasing (1% to 26%)	50	16	19	85
1% to 5%	20	10	13	43
6% to 10%	21	4	5	30
11% to 26%	9	2	1	12