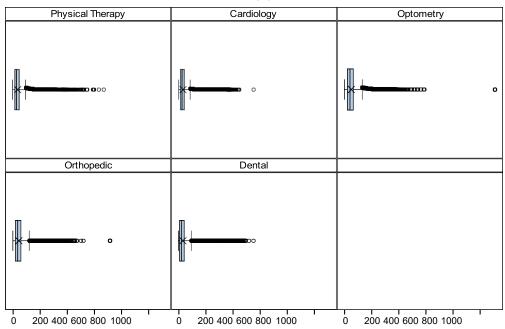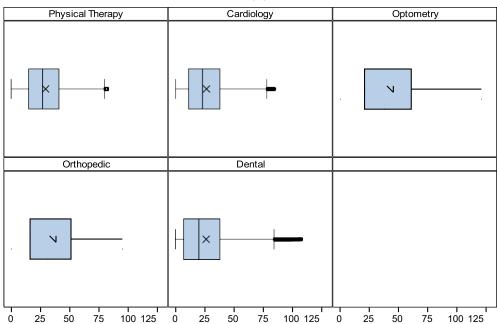# Figure 1. Box Plots

Distribution of Wait Time by Service
FY 2015

Days between when a consult is created and the visit date

Distribution of Bottom 95% Wait Time by Service
FY 2015

Days between when a consult is created and the visit date

Table 1. Mean Consult Wait Times With and Without top 5% during FY15[1] and FY18[1]

	FY15 (all data)			FY18 (all data)			FY15 (95%)			FY18 (95%)		
	mean	SD[2]	median	mean	SD	median	mean	SD	median	mean	SD	median
Physical Therapy	37.25	33.94	28	28.67	23.51	24	29.52	19.02	27	26.05	17.48	23
Cardiology	32.45	32.85	25	29.40	27.24	23	26.47	19.25	23	24.87	18.71	21
Optometry	51.29	43.61	41	40.18	34.39	32	42.87	27.66	38	35.36	25.70	30
Orthopedic	44.01	38.41	35	31.94	25.62	27	35.47	23.15	31	29.00	19.18	27
Dental	32.99	41.53	22	32.29	36.89	21	26.21	23.61	20	25.83	23.32	20

[1] VHA Fiscal Year (FY) October 1 - September 30
[2] Standard deviation (SD)

Table 2. Veteran Characteristics across Rural/Urban Strata, Service Types and Care Settings in FY18[1]

	Overall	Rural	Urban	Effect Size§	RCC[2]	RVA[3]	Effect Size^	UCC[4]	UVA[5]	Effect Size^
N New Patient consults	697,822	235,186	462,636		70,553	164,633		87,426	375,210	
N Veterans[6]	623,368	210,831	412,537		63,523	147,308		77,915	334,622	
Age in FY15 (mean (sd))	58.0 (15.12)	59.9 (14.17)	57.1 (15.50)	0.184	59.5 (14.24)	60.0 (14.14)	0.035	55.8 (15.50)	57.4 (15.48)	0.105
Nosos Risk Score (mean (sd))	1.40 (1.85)	1.31 (1.68)	1.45 (1.92)	0.078	1.20 (1.51)	1.35 (1.75)	0.096	1.31 (1.68)	1.48 (1.97)	0.091
Gender = M (%)	90%	92%	89%	0.119	92%	93%	0.026	88%	89%	0.047
Priority Group[7] (%)										
1-2	48%	48%	48%	0.015	52%	46%	0.123	58%	46%	0.233
3	21%	21%	20%	0.014	20%	21%	0.021	18%	21%	0.06
4-6	32%	32%	31%	0.004	28%	33%	0.115	24%	33%	0.204
Race/Ethnicity (%)										
Black, non-Hispanic	19.6	9%	25%	0.427	8%	10%	0.054	20%	26%	0.139
Hispanic	7.2	3%	9%	0.246	4%	3%	0.061	12%	9%	0.105
Other	3.1	3%	3%	0.052	3%	2%	0.049	4%	3%	0.024
White, non-Hispanic	65.6	81%	58%	0.504	79%	81%	0.05	59%	58%	0.014
Unknown	4.4	4%	4%	0.002	6%	4%	0.076	6%	4%	0.07
Marital Status (%)										
Divorced/Separated	27.9	25%	29%	0.090	25%	26%	0.019	28%	30%	0.043
Married	53.8	60%	50%	0.201	61%	60%	0.026	54%	50%	0.099
Single	12.5	8%	15%	0.199	8%	8%	<0.001	13%	15%	0.056
Widowed	4.7	5%	5%	0.023	5%	5%	0.034	4%	5%	0.063
Unknown	1.2	1%	1%	0.008	1%	1%	0.026	1%	1%	0.02

§ Rural vs Urban

Table 3. Unadjusted Consult Wait Time Measures across Rural/Urban Strata, Service Types, and Care Settings during FY15[1] and FY18[1]

2A: Number of Cases

	Overall	Rural	Urban		RCC[2]	RVA[3]		UCC[4]	UVA[5]	Effect Size^
FY15 N new patient consults	537,174	178,841	358,333		36,725	142,116		41,882	316,451	
FY18 N new patient consults	697,822	235,186	462,636		70,553	164,633		87,426	375,210	
FY15 N Veterans	489,334	163,789	325,536		35,669	131,471		41,037	289,119	
FY18 N Veterans	617,323	209,008	408,315		66,880	149,930		83,549	337,084	

2B: Mean Waiting Time and Effect Size (or P-value)

FY15

Service Type	Overall	Rural	Urban	Effect Size§	RCC	Mean	Effect Size^	UCC	UVA	Effect Size^
Physical Therapy	29.52	27.25	30.55	0.176	27.77	27.07	0.038	29.23	30.74	0.080
Cardiology	26.47	26.03	26.79	-0.002	27.86	25.75	0.107	28.46	26.65	0.091
Optometry	42.87	42.67	42.87	0.000	42.64	42.69	0.002	41.98	43.15	0.043
Orthopedic	35.47	35.18	35.67	-0.001	34.85	35.26	0.018	37.27	35.45	0.076
Dental	26.21	26.26	26.51	0.000	28.45	23.98	0.195	27.58	25.80	0.074

FY18

Service Type	Overall	Rural	Urban	Effect Size§	RCC	Mean	Effect Size^	UCC	UVA	Effect Size^
Physical Therapy	26.05	23.97	26.92	0.010	25.92	23.31	0.156	29.55	26.54	0.173
Cardiology	24.87	25.53	24.43	0.003	27.62	25.21	0.127	27.66	24.16	0.189
Optometry	35.36	35.27	34.76	0.001	36.51	34.55	0.077	36.87	34.11	0.109
Orthopedic	29.00	29.68	28.43	0.003	32.79	28.93	0.194	33.00	27.80	0.264
Dental	25.83	26.60	25.05	0.003	29.39	23.70	0.244	28.23	22.93	0.229

FY15-FY18 Difference (% Decline FY15-FY18)

Service Type	Overall	Rural	Urban	*P-value~*	RCC	RVA	*P-value*	UCC	UVA	*P-value*
Physical Therapy	0.12	3.27 (12)	3.64 (0.12)	< 0.001 ***	1.85 (7)	3.76 (0.14)	< 0.001 ***	-0.32 (-1)	4.2 (14)	< 0.001 ***
Cardiology	0.06	0.5 (2)	2.36 (0.09)	< 0.001 ***	0.24 (1)	0.54 (0.02)	0.5679	0.8 (3)	2.49 (9)	0.005 **
Optometry	0.18	7.4 (17)	8.11 (0.19)	< 0.001 ***	6.14 (14)	8.14 (0.19)	< 0.001 ***	5.11 (12)	9.03 (21)	< 0.001 ***
Orthopedic	0.18	5.5 (16)	7.24 (0.2)	< 0.001 ***	2.06 (6)	6.34 (0.18)	< 0.001 ***	4.27 (11)	7.65 (22)	< 0.001 ***
Dental	0.01	-0.34 (-1)	1.46 (0.06)	< 0.001 ***	-0.94 (-3)	0.28 (0.01)	0.0389 *	-0.65 (-2)	2.87 (11)	< 0.001 ***

2C: Probability of Waiting >30 Days and Effect Size (or P-value)

FY15

	Overall	Rural	Urban	Effect Size §	RCC	RVA	Effect Size^	UCC	UVA	Effect Size^

Service Type

Service Type										
Physical Therapy	0.41	0.36	0.44	0.153	0.37	0.36	0.021	0.40	0.44	0.083
Cardiology	0.36	0.35	0.37	0.044	0.39	0.34	0.092	0.40	0.37	0.076
Optometry	0.6	0.60	0.60	0.007	0.60	0.60	0.008	0.59	0.61	0.032
Orthopedic	0.51	0.51	0.51	0.004	0.51	0.52	0.020	0.55	0.51	0.091
Dental	0.33	0.34	0.34	0.008	0.37	0.30	0.154	0.36	0.33	0.068

FY18

Service Type

Service Type										
Physical Therapy	0.34	0.29	0.37	0.160	0.31	0.29	0.046	0.39	0.36	0.052
Cardiology	0.32	0.34	0.31	0.055	0.37	0.33	0.079	0.37	0.31	0.127
Optometry	0.49	0.49	0.47	0.034	0.51	0.48	0.068	0.53	0.46	0.142
Orthopedic	0.41	0.42	0.39	0.053	0.47	0.41	0.129	0.48	0.38	0.190
Dental	0.32	0.33	0.30	0.069	0.38	0.29	0.187	0.35	0.27	0.160

FY15-FY18 Difference (% Decline FY15-FY18)

Service Type

Service Type				P-value			P-value			P-value
Physical Therapy	0.07	0.07 (19)	0.07 (16)	0.46	0.06 (16)	0.07 (20)	0.486	0.01 (3)	0.08 (17)	< 0.001 ***
Cardiology	0.04	0.01 (2)	0.05 (15)	0.001 **	0.01 (4)	0.01 (2)	0.6260	0.03 (8)	0.06 (15)	0.005 **
Optometry	0.11	0.11 (18)	0.13 (22)	0.48	0.09 (14)	0.12 (21)	0.001 **	0.06 (11)	0.15 (25)	0.001 **
Orthopedic	0.11	0.09 (18)	0.12 (23)	< 0.001 ***	0.03 (7)	0.11 (21)	< 0.001 ***	0.08 (14)	0.12 (24)	< 0.001 ***
Dental	0.02	0 (1)	0.04 (11)	< 0.001 ***	-0.01 (-1)	0.01 (3)	0.51	0.01 (4)	0.05 (17)	< 0.001 ***

§ Rural vs Urban

^ CC vs VA

~p-value reported for absolute difference (FY15-FY18 difference)

* p-value<=0.05

** p-value< 0.01

*** p-value<0.001

[1] VHA Fiscal Year (FY) October 1 - September 30

[2] RCC represents rural Veterans using Community Care

[3] RVA represents rural Veterans using Veterans Health Affairs

[4] UCC represents urban Veterans using Community Care

[5] UVA represents urban Veterans using Veterans Health Affairs

Table 4. Logistic Regression Predicting Probability of Mean Consult Wait Time > 30 Days for Five Types of Services in FY15[1] and FY18[1]

	Type of Service				
	Physical Therapy	Cardiology	Optometry	Orthopedic	Dental
N Veterans	382,542	229,880	260,286	245,728	82,469
N new patient consults	392,750	234,892	264,906	251,971	83,951
	Log odds (SE[2])	Log odds (SE)	Log odds (SE)	Log odds (SE)	Log odds (SE)
RCC[3]	-0.01 (0.03)	-0.55 (0.05) ***	0.17 (0.03) ***	0.1 (0.04) *	0.1 (0.05)
RVA[4]	-0.04 (0.02)	-0.73 (0.03) ***	0.19 (0.02) ***	0.14 (0.02) ***	0.09 (0.05)
UCC[5]	0.02 (0.03)	-0.52 (0.05) ***	0.11 (0.03) ***	0.26 (0.03) ***	0.01 (0.05)
UVA[6]	0.20 (0.02) ***	-0.66 (0.03) ***	0.17 (0.02) ***	0.06 (0.02) *	0.16 (0.04) **
RCC * FY18	-0.28 (0.03) ***	-0.06 (0.04)	-0.31 (0.02) ***	-0.15 (0.04) ***	-0.01 (0.04)
RVA * FY18	-0.33 (0.01) ***	-0.03 (0.02)	-0.46 (0.02) ***	-0.45 (0.02) ***	-0.13 (0.04) **
UCC * FY18	-0.05 (0.03)	-0.09 (0.05)	-0.18 (0.02) ***	-0.33 (0.03) ***	-0.08 (0.03)
UVA * FY18	-0.3 (0.01) ***	-0.21 (0.01) ***	-0.52 (0.01) ***	-0.51 (0.01) ***	-0.29 (0.03) ***
Race/Ethnicity (Reference = white, non-Hispanic)					
Black, non-Hispanic	0.35 (0.01) ***	0.15 (0.02) ***	0.32 (0.01) ***	0.33 (0.02) ***	0.17 (0.03) ***
Hispanic	0.37 (0.02) ***	0.35 (0.03) ***	0.14 (0.02) ***	-0.19 (0.03) ***	0.21 (0.04) ***
Other	0.15 (0.03) ***	0.05 (0.05)	0.05 (0.03)	-0.07 (0.04)	0.25 (0.07) **
Unknown	0.13 (0.03) ***	-0.05 (0.04)	0.02 (0.02)	-0.04 (0.03)	0.19 (0.06) *
Race/Ethnicity * FY18 (Reference = white, non-Hispanic)					
Black, non-Hispanic * FY18	-0.11 (0.02) ***	-0.12 (0.02) ***	-0.30 (0.02) ***	-0.07 (0.02) *	-0.02 (0.04)
Hispanic * FY18	-0.10 (0.03) **	-0.37 (0.04) ***	-0.04 (0.03)	0.10 (0.03) *	-0.20 (0.06) **
Other * FY18	0.07 (0.04)	-0.05 (0.06)	-0.04 (0.05)	0.21 (0.05) ***	-0.18 (0.09)
Unknown * FY18	-0.05 (0.03)	0.11 (0.04)	0.05 (0.04)	0.09 (0.04)	-0.22 (0.07) *
Male (Reference = female)	-0.12 (0.01) ***	-0.04 (0.02)	-0.07 (0.01) ***	-0.04 (0.01) *	-0.07 (0.03) *
Age (FY15)	-0.01 (0.00) ***	0.00 (0.00) ***	0.01 (0.00) ***	0.00 (0.00)	-0.01 (0.00) ***
Nosos Risk Score	-0.04 (0.00)	-0.04 (0.00)	-0.03 (0.00)	-0.04 (0.00)	-0.08 (0.00)
Priority Group[7] (Reference = 1-2)					
Priority 3	-0.09 (0.01) ***	-0.02 (0.01)	-0.05 (0.01) ***	-0.05 (0.01) ***	-0.45 (0.03) ***
Priority 4-6	-0.07 (0.01) ***	0.00 (0.01)	-0.06 (0.01) ***	-0.11 (0.01) ***	-0.67 (0.02) ***
Marital Status (Reference = single)					
Divorced/Separated	0.01 (0.01)	0.03 (0.02)	0.01 (0.01)	0.05 (0.01) ***	-0.03 (0.03)
Married	0.00 (0.01)	0.03 (0.02)	-0.01 (0.01)	0.09 (0.01) ***	0.03 (0.02)

Widowed	-0.05 (0.02) *	0.01 (0.02)	-0.02 (0.02)	0.04 (0.02)	-0.01 (0.05)
Unknown	0.01 (0.03)	-0.02 (0.05)	0.03 (0.04)	0.20 (0.04) ***	0.08 (0.08)

* p-value < 0.01
** p-value < 0.001
*** p-value < 0.0001

[1] VHA Fiscal Year (FY) October 1 - September 30
[2] Days refers to the coefficient associated with the variable in column 1
[3] Standard Error (SE)
[4] RCC represents rural Veterans using Community Care
[5] RVA represents rural Veterans using Veterans Health Affairs
[6] UCC represents urban Veterans using Community Care
[7] UVA represents urban Veterans using Veterans Health Affairs
[8] Priority Group 1: Veterans with VHA-rated service-connected disabilities 50% or more disabling; Veterans determined by VHA to be unemployable due to service-connected conditions; Priority Group 2: Veterans with VHA-rated service-connected disabilities 30% or 40% disabling; Priority Group 3: Veterans who are Former Prisoners of War (POWs); Veterans awarded a Purple Heart medal; Veterans whose discharge was for a disability that was incurred or aggravated in the line of duty; Veterans with VHA-rated service-connected disabilities 10% or 20% disabling; Veterans awarded "benefits for individuals disabled by treatment or vocational rehabilitation;" Veterans awarded the Medal Of Honor (MOH); Priority Group 4: Veterans who receive aid and attendance or housebound benefits from VHA; Veterans who are considered "catastrophically disabled" by VHA; Priority Group 5: Non-service-connected Veterans and non-compensable service-connected Veterans rated 0% disabled by VHA with annual income below VHA's adjusted income limits; Veterans receiving VHA pension benefits; Veterans eligible for Medicaid programs; Priority Group 6: Compensable 0% service-connected Veterans; Veterans exposed to Ionizing Radiation during atmospheric testing or during the occupation of Hiroshima and Nagasaki; Project 112/SHAD participants; Veterans who served in Vietnam; Veterans of the Persian Gulf War; Veterans who served on active duty at Camp Lejeune for at least 30 days (US Department of Veterans Affairs 2017.) We grouped priority groups based on the following: Groups 1-2 (more service-connected), Group 3 (a mix of eligibility criteria) and Groups 4-6 (not service connected).