

VA



U.S. Department  
of Veterans Affairs

# HSR&D Researcher in Residence: Analyzing Current Challenges Facing OT and PT Services Purchased in the Community

Rachel E. Ward, MPH, PhD;

Douglas Bidelspach, MPT;

Joel Scholten, MD



## POLL QUESTION

- What is your primary role in VA?
  - student, trainee, or fellow
  - clinician
  - researcher
  - manager or policy-maker
  - Other



## VA RESEARCHERS IN RESIDENCE PROGRAM

- HSR&D funded “researchers in residence”
- .25 FTE dedicated to time with clinical program offices
- Provide analytic support and bring research knowledge to policy and program planning



# VA RESEARCHERS IN RESIDENCE PROGRAM

- Program or operations offices will benefit from:
  - Advance analytic expertise
  - Access to a network of research knowledge.
- HSR&D researchers will benefit by:
  - Increasing their understanding of policy and operations
  - Experience with operational data analysis



## VA RESEARCHERS IN RESIDENCE PROGRAM

- Program office identifies the policy or clinical issue for the project, such as:
  - Analyzing impact of a policy change;
  - Developing evidence-based policy responses to an emerging clinical problem;
  - Exploring factors associated with variation in clinical performance, etc.
- Researchers and Program office collaborate to analyze the data and identify key findings to assist in strategic planning



# OVERVIEW

- **Objective:** To compare utilization and cost for PT and OT services in the VA vs. purchased in the community through the CHOICE program
- **Study population:** Veterans who received PT and OT care through the VA or the CHOICE program in FY15 and FY16

Inclusions/Exclusions	
CHOICE Care	VA Care
FY 15 and 16	Visit date between 10/1/2014 and 9/30/2016 (FY 15 and 16)
Occupational Therapy and Physical Therapy Categories of Care	Primary or secondary stop code of 205 or 206 (PT and OT)
Unique Veterans defined using scrambled SSN and first episode of care date	Unique Veterans defined using PatientICN and first visit date and time
	VerteranFlag of NULL or Y
	No Ineligible Date or Ineligible Reason



# DEMOGRAPHICS

	CHOICE users (n=179,678)	VA users (n=1,353,047)
Age, years, mean (SD)	<b>57.3</b> (15.1)	<b>61.5</b> (16.1)
Gender, male, n (%)	<b>155,574</b> (86.6)	<b>1,227,764</b> (90.7)
Missing	3	0
Rurality , n (%)		
Highly Rural	<b>18,745</b> (10.4)	<b>14,654</b> (1.1)
Rural	<b>73,321</b> (40.8)	<b>410,712</b> (30.4)
Urban	<b>86,404</b> (48.1)	<b>925,917</b> (68.4)
Missing	1,208	1,764

Numbers are **mean** (SD) or **n** (%). **Age** for CHOICE users calculated from first encounter date; **age** for VA users calculated from first visit date. Demographics for CHOICE users narrowed using VACAA.TPA\_mnthlyChoice and pulled from VACAA.Patients; demographics for VA users narrowed using Output.Workload and Dim.StopCode and pulled from SPatient.Spatient.



# UTILIZATION

CHOICE Care				
	OT		PT	
	FY 15	FY 16	FY 15	FY 16
Vets	4	2,069	4,918	77,356
Visits	12	31,078	68,365	1,412,637
Visits/Vet	3	15	14	18
VA Care				
	OT		PT	
	FY 15	FY 16	FY 15	FY 16
Vets	220,363	233,027	558,712	588,235
Enc	586,307	625,653	1,796,505	1,951,655
Enc/Vet	3	3	3	3

\*Utilization for VA pulled from DSS.Out; utilization for CHOICE provided by CBOPC Informatics.

Vet = Veteran; Enc = Encounter; Auth = Authorization.



# UTILIZATION INCLUDING AND EXCLUDING VETERANS WITH $\leq 3$ VISITS

VA Care				
	Including Veterans with $\leq 3$ visits			
	OT		PT	
	FY 15	FY 16	FY 15	FY 16
Veterans	220,363	233,027	558,712	588,235
Encounters	586,307	625,653	1,796,505	1,951,655
Enc/Vet	3	3	3	3
Excluding Veterans with $\leq 3$ visits				
	OT		PT	
	FY 15	FY 16	FY 15	FY 16
Veterans	35,728	38,745	142,238	158,126
Encounters	336,763	362,874	1,210,948	1,340,468
Enc/Vet	9	9	9	8

**CHOICE Care:** The percentages of authorizations for Veterans with  $\leq 3$  visits were 100% and 55% for OT care during FY 15 and 16, respectively and 50% and 42% for PT care during FY 15 and 16, respectively.

\*Utilization for VA pulled from DSS.Out; utilization for CHOICE provided by CBOPC Informatics. Enc = Encounter



# UTILIZATION BY COMPLEXITY LEVEL

Complexity	CHOICE Care						VA Care					
	OT			PT			OT			PT		
	Visits	Vets	Visits/ Vet	Visits	Vets	Visits/ Vet	Enc	Vets	Enc/ Vet	Enc	Vets	Enc/ Vet
1a	13,388	934	14	638,617	34,774	18	576,994	184,967	3	1,624,006	426,072	4
1b	7,672	444	17	291,752	13,403	22	185,723	60,614	3	666,646	178,552	4
1c	3,168	214	15	203,421	10,842	19	169,153	62,453	3	586,971	151,790	4
2	1,577	105	15	126,857	7,456	17	132,266	48,895	3	435,227	119,306	4
3	6,378	407	16	247,797	13,157	19	147,824	43,837	3	435,310	108,737	4
Missing*	8	1	--	127	9	--	--	--	--	--	--	--

\*Missing Station number – could not classify by complexity. Auth = Authorization; Vet = Veteran



# LOWEST AND HIGHEST UTILIZATION AT STATION LEVEL

	CHOICE Care		VA Care	
	OT	PT	OT	PT
Lowest Utilization	Visits	Visits	Encounters	Encounters
Visits or Encounters	1	25	1	4,579
Visits or Encounters per Veteran	1	8.4	1	1.8
Highest Utilization				
Visits or Encounters	2,723	85,879	43,596	91,086
Visits or Encounters per Veteran	60	29.2	16.1	7.8



# COST PER VETERAN - NATIONALLY

CHOICE Care					VA Care				
	OT		PT			OT		PT	
	FY 15	FY 16	FY 15	FY 16		FY 15	FY 16	FY 15	FY 16
Amount Paid/Vet	233.14	741.24	686.65	859.69	Direct Cost/Vet	284.73	314.76	271.06	290.49
Admin Cost/Vet	310	310	310	310	Indirect Cost/Vet	220.66	243.22	209.98	225.51
Total Cost/Vet	543.14	1,051.24	996.65	1,169.69	Total Cost/Vet	505.39	557.98	481.03	516.00
Total Cost	2,173	2,175,018	4,901,538	90,482,349	Total Cost	111,368,937	130,024,226	268,759,491	303,527,135

Units in dollars.

**Admin Cost for CHOICE Care** = number of unique veterans \* \$310 for administration fees.

**Total Cost for CHOICE data** = Amount Paid + Admin Cost. CHOICE data provided by CBOPC Informatics; VA data pulled from DSS.Out. Vet = Veteran.



# COST OR AMOUNT PAID PER VETERAN BY COMPLEXITY LEVEL

Complexity	CHOICE Care				VA Care					
	OT		PT		OT			PT		
	Paid	Total	Paid	Total	Total	Direct	Indirect	Total	Direct	Indirect
1a	670.33	980.33	841.15	1151.15	628.20	361.55	266.65	580.25	335.05	245.31
1b	853.85	1163.85	1,047.33	1357.33	586.29	336.98	249.31	560.25	323.07	237.18
1c	631.89	941.89	870.66	1180.66	544.51	316.82	227.69	585.77	333.19	252.58
2	700.93	1010.93	820.19	1130.19	478.18	257.75	220.44	506.50	278.58	227.92
3	953.47	1263.47	1,084.68	1394.68	736.21	374.19	362.02	695.57	350.07	345.50
Missing*	401.18	--	609.62	--	--	--	--	--	--	--

\*Missing Station number – could not classify by complexity. Units are in dollars per veteran. **Total cost for CHOICE Care** = Amount paid + \$310 for Admin cost.



# LOWEST AND HIGHEST TOTAL COST PER VETERAN AT STATION LEVEL

Lowest Total Cost per Veteran		
OT	CHOICE Care	352.5
	VA Care	237.7
PT	CHOICE Care	402.38
	VA Care	193.57
Highest Total Cost per Veteran		
OT	CHOICE Care	2,938.94
	VA Care	2,394.24
PT	CHOICE Care	2,241.55
	VA Care	1,858.45

Units in dollars per veteran. **Total cost for CHOICE Care** = Amount paid + \$310 for Admin cost.



# 5 STATIONS WITH THE HIGHEST TOTAL COST PER VETERAN

CHOICE Care				VA Care			
OT		PT		OT		PT	
Station	Total	Station	Total	Station	Total	Station	Total
(V21) (654) Reno, NV	2,938.94	(V20) (463) Anchorage, AK	2,241.55	(V16) (564) Fayetteville, AR	2,394.24	(V19) (666) Sheridan, WY	1,858.45
(V15) (589) Eastern KS HCS, KS	1,721.09	(V16) (629) New Orleans, LA	1,872.85	(V19) (666) Sheridan, WY	1,895.19	(V20) (687) Walla Walla, WA	1,732.61
(V19) (436) Montana HCS	1,678.54	(V16) (667) Shreveport, LA	1,677.56	(V18) (649) Northern Arizona HCS	1,679.77	(V03) (620) VA Hudson Valley HCS, NY	1,377.13
(V08) (516) Bay Pines, FL	1,578.36	(V22) (600) Long Beach, CA	1,645.21	(V22) (593) Las Vegas, NV	1,544.28	(V12) (578) Hines, IL	1232.65
(V16) (629) New Orleans, LA	1,566.67	(V18) (756) El Paso, TX	1,580.03	(V08) (546) Miami, FL	1,450.19	(V20) (463) Anchorage, AK	1,177.85

Units in dollars per veteran. **Total cost for CHOICE Care** = Amount paid + \$310 for Admin cost.



# 5 STATIONS WITH THE LOWEST TOTAL COST PER VETERAN

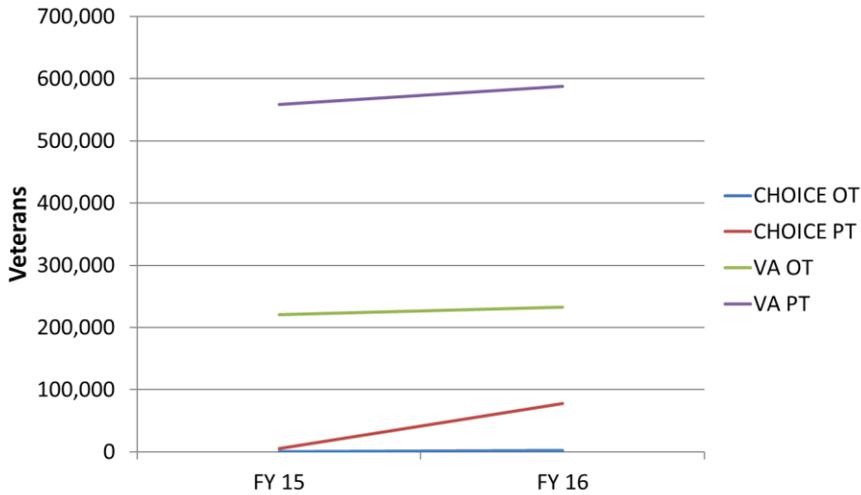
CHOICE Care				VA Care			
OT		PT		OT		PT	
Station	Total	Station	Total	Station	Total	Station	Total
(V04) (693) Wilkes-Barre, PA	352.50	(V06) (659) Salisbury, NC	402.38	(V16) (586) Jackson, MS	237.70	(V16) (635) Oklahoma City, OK	193.57
(V19) (436) Montana HCS	396.80	(V19) (666) Sheridan, WY	435.78	(V23) (437) Fargo, ND	243.29	(V04) (642) Philadelphia, PA	219.17
(V23) (568) Black Hills HCS, SD	405.46	(V12) (676) Tomah, WI	447.44	(V15) (589A4) Columbia, MO	245.10	(V16) (586) Jackson, MS	259.87
(V08) (573) Gainesville, FL	410.90	(V15) (657) St. Louis, MO	494.11	(V07) (534) Charleston, SC	250.71	(V23) (437) Fargo, ND	262.96
(V05) (688) Washington, DC	423.45	(V04) (693) Wilkes-Barre, PA	584.47	(V09) (621) Mountain Home, TN	251.63	(V06) (565) Fayetteville, NC	268.35

Units in dollars per veteran. **Total cost for CHOICE Care** = Amount paid + \$310 for Admin cost.

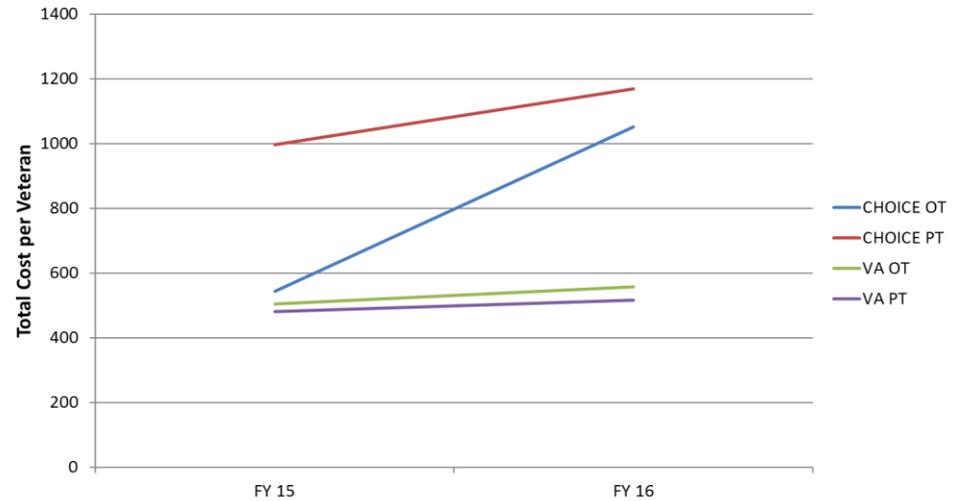


# CHANGE IN UTILIZATION AND COST FROM FY 15 TO FY 16

### Utilization

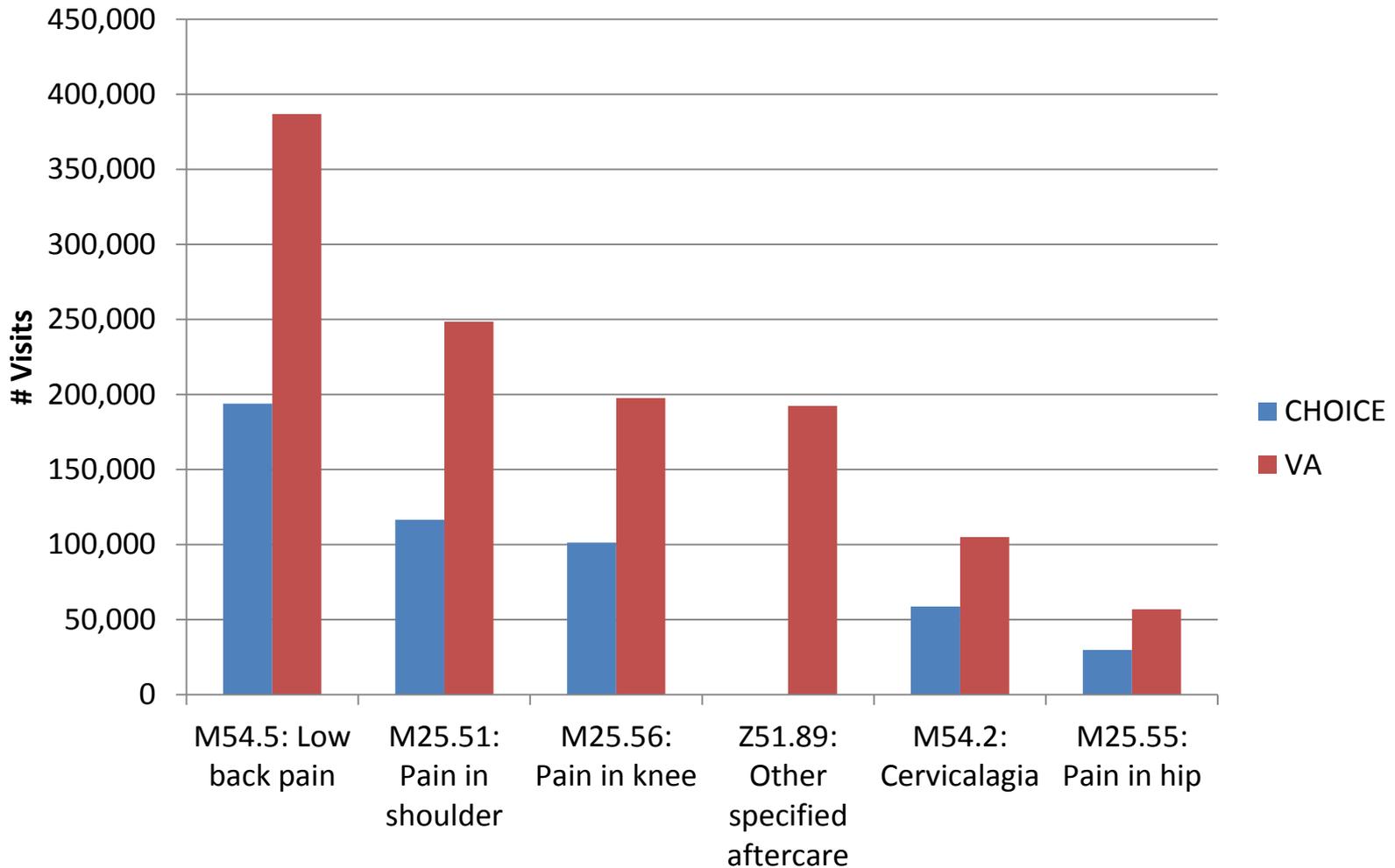


### Cost





# NUMBER OF VISITS FOR TOP ICD<sub>10</sub> CODES





# ICD10 CODES WITH THE MOST VISITS

Rank	CHOICE Care			VA Care		
	Dx code	Dx Description	Visits, n (%)	Dx code	Dx Description	Visits, n (%)
1	M54.5	Low back pain	193,840 (20.4)	M54.5	Low back pain	386,933 (15.2)
2	M25.51	Pain in shoulder	116,545 (12.2)	M25.51	Pain in shoulder	248,471 (9.7)
3	M25.56	Pain in knee	101,232 (10.6)	M25.56	Pain in knee	197,626 (7.7)
4	M54.2	Cervicalgia	58,720 (6.2)	Z51.89	Encounter for other specified aftercare	192,439 (7.5)
5	M25.55	Pain in hip	29,797 (3.1)	M54.2	Cervicalgia	104,913 (4.1)
6	M62.81	Muscle weakness	19,218 (2.0)	M25.55	Pain in hip	56,927 (2.2)
7	R26.2	Difficulty in walking	16,126 (1.7)	R26.89	Other abnormalities of gait and mobility	46,559 (1.8)
8	M25.57	Pain in ankle and joints of foot	14,214 (1.5)	R26.9	Unspecified abnormalities of gait and mobility	45,333 (1.8)
9	Z96.65	Presence of artificial knee joint	12,602 (1.3)	R26.2	Difficulty in walking	41,646 (1.6)
10	M54.16	Radiculopathy, lumbar region	9,705 (1.0)	M62.81	Muscle weakness	38,664 (1.5)
11	M17.11	Unilateral primary osteoarthritis, right knee	6,814 (0.7)	M25.57	Pain in ankle and joints of foot	29,806 (1.2)
12	M54.6	Pain in thoracic spine	6,306 (0.7)	R53.1	Weakness	26,875 (1.1)
13	M79.6	Pain in limb, hand, foot, finger, and toes	6,294 (0.7)	M79.64	Pain in hand and fingers	25,903 (1.0)
14	M54.41	Lumbago with sciatica, right side	6,285 (0.7)	I63.9	Cerebral infarction	20,107 (0.8)
15	M75.12	Complete rotator cuff tear or rupture	5,980 (0.6)	G20	Parkinson's disease	18,118 (0.7)



# ACCESS TIME – MISSING DATA

	CHOICE Care			
	OT		PT	
	FY 15	FY 16 N=1,103	FY 15 N=20,810	FY 16 N=157,766
Request date	--	1,046 (94%)	43 (0.0002%)	96,118 (60%)
Scheduling date	--	296 (26%)	7,582 (36%)	34,030 (21%)
EOC start date	--	0 (0%)	5,977 (28%)	20,205 (12%)
Authorization creation date	--	0 (0%)	0 (0%)	7 (0.00004%)



# ACCESS TIME

	CHOICE Care				VA Care			
	OT		PT		OT		PT	
	FY 15	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15	FY 16
Request date to scheduling date	--	<b>9</b> (19)	<b>12</b> (13)	<b>9</b> (16)	--	--	--	--
Scheduling date to EOC start date	--	<b>9</b> (10)	<b>5</b> (13)	<b>8</b> (15)	--	--	--	--
Request date to EOC/Activity start date	--	<b>8</b> (9)	<b>15</b> (17)	<b>13</b> (24)	<b>7</b> (19)	<b>7</b> (17)	<b>9</b> (25)	<b>9</b> (22)
Authorization creation date to EOC start date	--	<b>8</b> (15)	<b>8</b> (17)	<b>10</b> (18)	--	--	--	--

Units are **mean** (SD) of days for the first EOC start date for a unique veteran.

**Request date** = the date care was requested by the Veteran or Vendor.

**Scheduling date** = date patient was contacted for appointment scheduling.

**EOC start date** = Date of the initial appointment to start the episode of care.

**Authorization creation date** = Date the authorization was created.



# LIMITATIONS

- Project was completed prior to addition of Program Integrity Tool (PIT) domain
  - Limited documentation and access
  - Worked with VA Chief Business Office Purchased Care (CBOPC) to access CHOICE cost data.
- Data may not take into account the full admin costs – e.g. billing private insurance
- Could not compare access time due to missing CHOICE data



# DISCUSSION

- Why are the number of visits so high for CHOICE?
- Future direction – do these trends continue for FY 17 – beyond our 1 year project
- How do we monitor quality and outcomes for VA and Community Care?



# ACKNOWLEDGEMENTS

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- Christine Hartmann, PhD, Investigator, CHOIR
- Kelly Stolzmann, MS, Senior Research Analyst, CHOIR



# QUESTIONS

