

Economic Burden, Treatment Utilization, and Medication Adherence of Post-Traumatic Stress Disorder Patients: A Retrospective Commercial and Medicare Part B Insurance Claims Analysis

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INTRODUCTION

- Post-traumatic stress disorder (PTSD) has a 2.3-9.1% annual prevalence rate among US civilians¹
- PTSD significantly affects a patient's general well-being and requires appropriate management that typically consists of psychotherapy and/or medication^{2,3}
- This real-world study aimed to provide a thorough analysis of **economic burden**, in terms of healthcare costs and resource consumption, and **treatment characteristics** (therapy utilization and adherence) related to PTSD

METHODS

- The analysis used Merative MarketScan[®] insurance claims of commercial and Medicare Part B patients
- Patients with cancer, only acute PTSD, and insurance gaps during the study period were excluded
- Adults with PTSD diagnosis (first event assigned as index date) were observed during 1-year pre-index and 2-year follow-up periods (Figure 1)

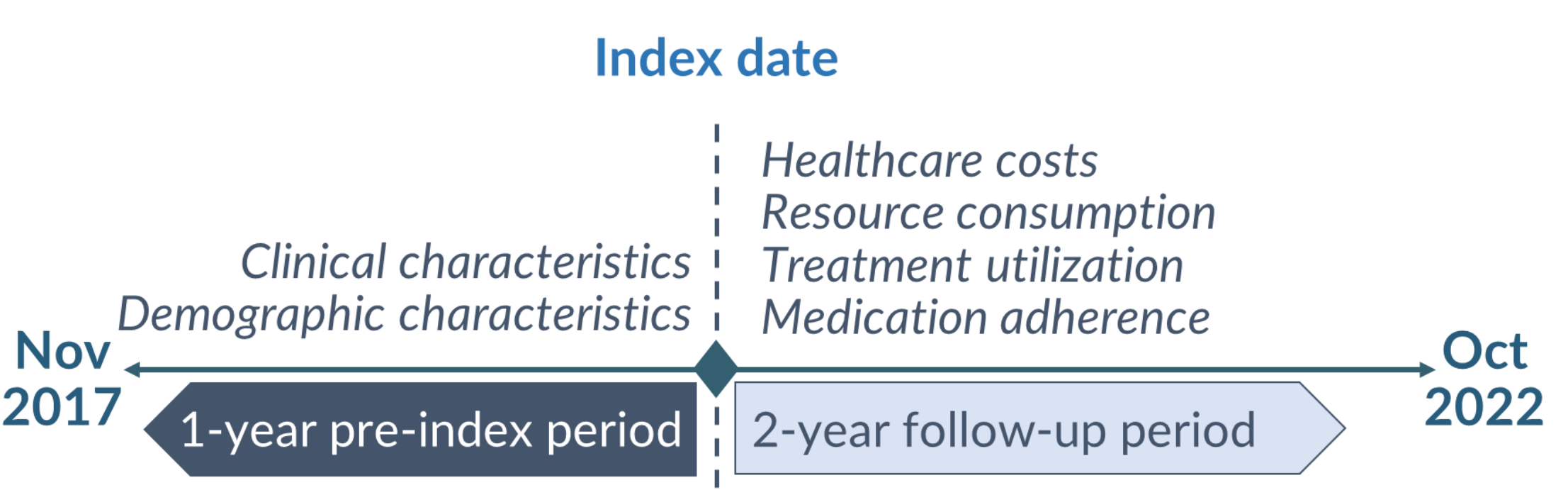


Figure 1. Study design

- All outcomes were explored during the 2-year follow-up
- PTSD was stratified into three severity cohorts based on the number of PTSD claims, mental health comorbidities* (MHC), and use of PTSD treatments (FDA-approved medication or psychotherapy)
 - Baseline PTSD (BP):** only 1 (index) PTSD claim, without MHC, and no PTSD treatments
 - PTSD without Comorbidities (PwoC):** >1 PTSD claim and no MHC
 - PTSD with Comorbidities (PwC):** >1 PTSD claim and with at least one MHC
- Propensity-score matching using population characteristics was performed to minimize selection bias

*MHC included major depressive disorder, schizophrenia, and bipolar disorder^{4,5}

Chronic PTSD with mental health comorbidities had a higher economic burden and treatment use

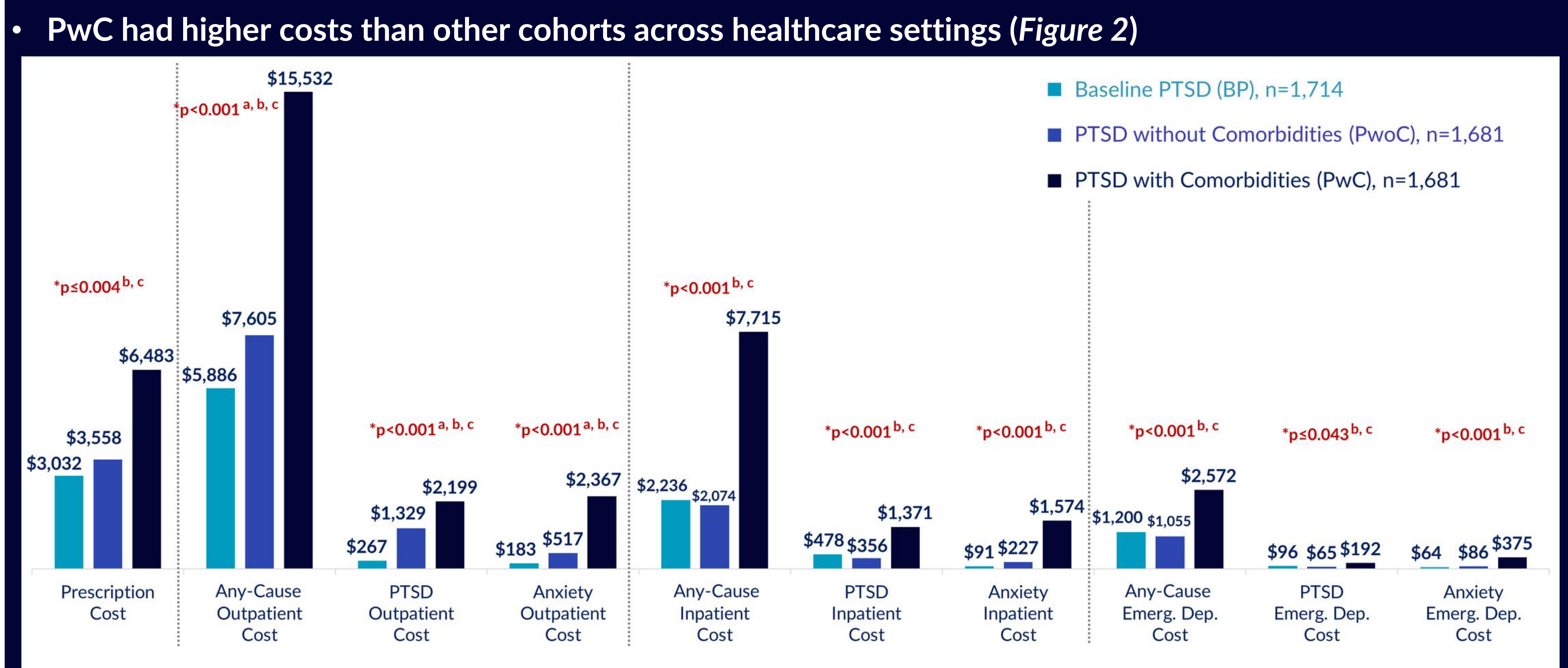


Figure 2. Healthcare costs per patient across healthcare settings stratified by PTSD cohort

- PwC had higher costs than other cohorts across healthcare settings (Figure 2)
- PwC also had higher total costs (Figure 3)
- Medication adherence (PDC) was low (Table 1)

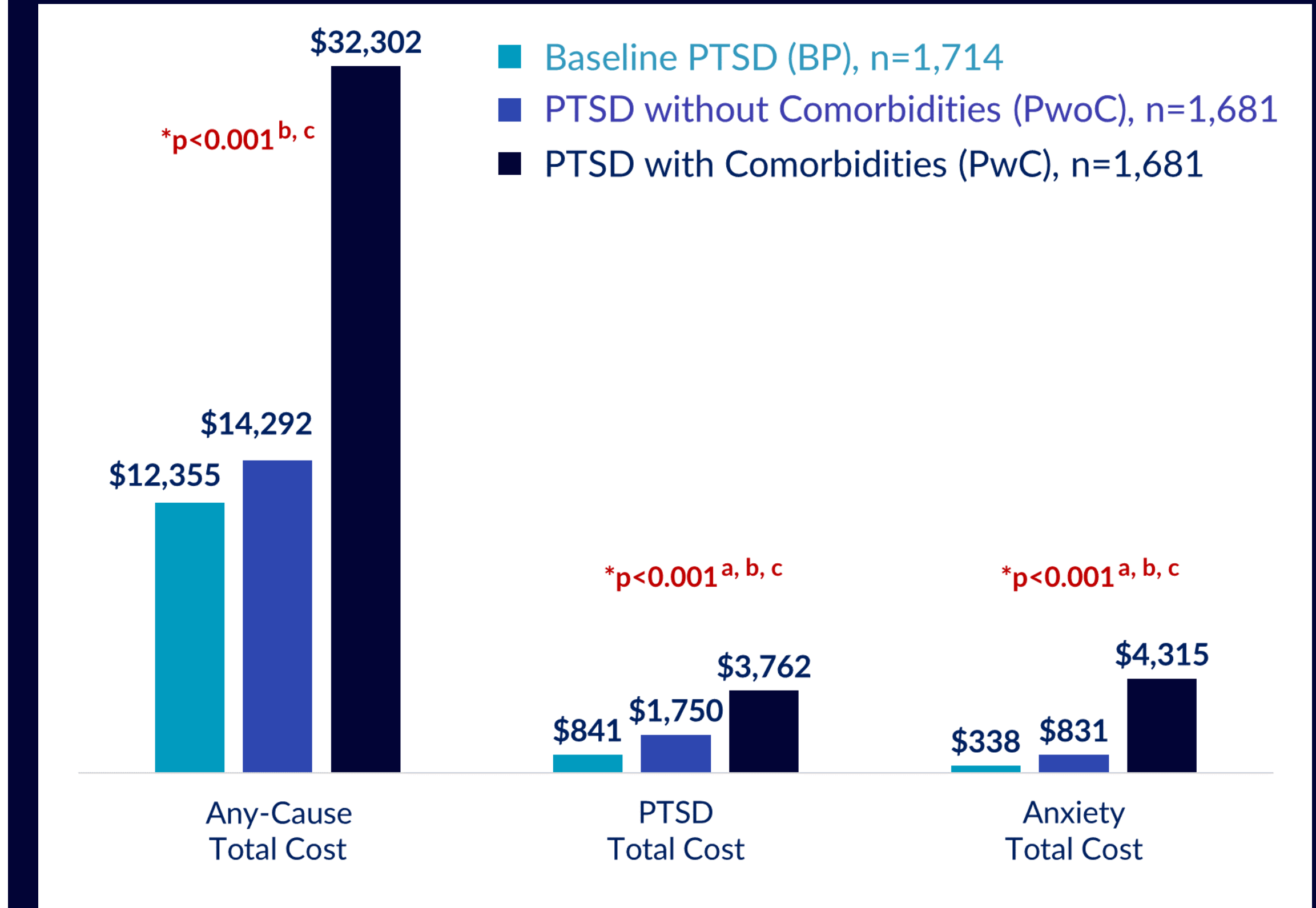


Figure 3. Total healthcare costs per patient stratified by PTSD cohort

	Total n=5,076	BP n=1,714	PwoC n=1,681	PwC n=1,681	P-value*
FDA-approved PTSD medications					
Sertraline, n (%)	567 (11.2)	0 (0.0)	192 (11.4)	375 (22.3)	<0.001 ^{a,b,c}
PDC, mean (SD)	0.40 (0.32)	-	0.41 (0.32)	0.39 (0.31)	0.519
PDC ≥0.80, n (%)	97 (17.1)	-	36 (18.8)	61 (16.3)	0.457
Paroxetine, n (%)	104 (2.0)	0 (0.0)	30 (1.8)	74 (4.4)	<0.001 ^{a,b,c}
PDC, mean (SD)	0.37 (0.31)	-	0.45 (0.31)	0.33 (0.30)	0.083
PDC ≥0.80, n (%)	15 (14.4)	-	5 (16.7)	10 (13.5)	0.678
Off-label PTSD medications					
Bupropion, n (%)	654 (12.9)	96 (5.6)	130 (7.7)	428 (25.5)	≤0.013 ^{a,b,c}
PDC, mean (SD)	0.39 (0.31)	0.34 (0.31)	0.38 (0.31)	0.41 (0.31)	0.154
PDC ≥0.80, n (%)	103 (15.7)	11 (11.5)	22 (16.9)	70 (16.4)	0.453
Escitalopram, n (%)	610 (12.0)	134 (7.8)	160 (9.5)	316 (18.8)	<0.001 ^{a,b,c}
PDC, mean (SD)	0.37 (0.32)	0.38 (0.33)	0.39 (0.34)	0.36 (0.30)	0.719
PDC ≥0.80, n (%)	107 (17.5)	25 (18.7)	38 (23.8)	44 (13.9)	0.007 ^a
Fluoxetine, n (%)	456 (9.0)	77 (4.5)	108 (6.4)	271 (16.1)	≤0.013 ^{a,b,c}
PDC, mean (SD)	0.37 (0.32)	0.39 (0.33)	0.40 (0.34)	0.36 (0.32)	0.754
PDC ≥0.80, n (%)	73 (16.0)	13 (16.9)	21 (19.4)	39 (14.4)	0.468
Bupirone, n (%)	412 (8.1)	71 (4.1)	102 (6.1)	239 (14.2)	≤0.011 ^{a,b,c}
PDC, mean (SD)	0.27 (0.27)	0.28 (0.29)	0.27 (0.30)	0.27 (0.26)	0.997
PDC ≥0.80, n (%)	33 (8.0)	6 (8.5)	10 (9.8)	17 (7.1)	0.696
Prazosin, n (%)	338 (6.7)	32 (1.9)	73 (4.3)	233 (13.9)	<0.001 ^{b,c}
PDC, mean (SD)	0.25 (0.26)	0.16 (0.24)	0.20 (0.21)	0.27 (0.27)	0.060
PDC ≥0.80, n (%)	27 (8.0)	2 (6.3)	2 (2.7)	23 (9.9)	0.136

Table 1. PTSD medication utilization and adherence per patient

- PwC had significantly higher treatment use (all *p<0.001^{a,b,c}) than other cohorts (Figure 4)

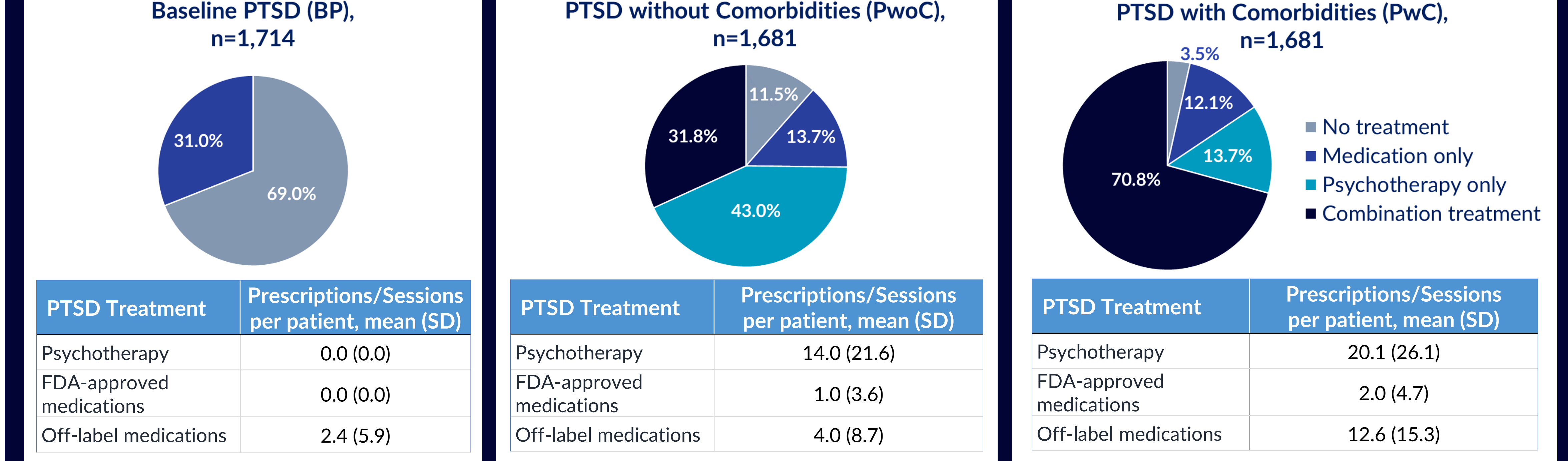


Figure 4. PTSD treatment use per patient stratified by PTSD cohort

*Note (p-values): ^aBaseline PTSD vs. PTSD without Comorbidities; ^bBaseline PTSD vs. PTSD with Comorbidities; ^cPTSD without Comorbidities vs. PTSD with Comorbidities

RESULTS - Economic Burden

- The final matched sample included 5,076 patients (1,714 BP, 1,681 PwoC, 1,681 PwC)
- Total sample of PTSD patients had \$19,602 any-cause, \$2,109 PTSD, and \$1,818 anxiety-related total costs
- Economic burden was mostly driven by provided services in an outpatient setting (Figure 2)
- PwC had significantly higher costs (Figure 2) and resource utilization than other cohorts

RESULTS - Treatment Characteristics

- During the follow-up period, 71.7% of patients received PTSD treatment of some type:
 - Psychotherapy - 52.8% (mostly individual sessions)
 - Off-label medications - 48.5% (mostly bupropion)
 - FDA-approved medications - 12.9% (mostly sertraline)
 - Any medication and psychotherapy - 34.0%
- Proportion of days covered (PDC) showed poor medication adherence (Table 1)
- The highest rate of adherent patients (PDC≥0.80) was associated with escitalopram (17.5%)

CONCLUSION

- PTSD is associated with high costs and low adherence
- Economic burden and treatment utilization were highest in patients with chronic PTSD and MHC

FUNDING

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DISCLOSURES

- FS, VZ, and DG are employees of ZRx Outcomes Research Inc., which received funding from Lykos Therapeutics for this work. DDA and WB are employees of and have stocks/stock options in Lykos Therapeutics

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