

Documentation of Evidence-Based Psychotherapy and Care Quality for PTSD in the Department of Veterans Affairs

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Abstract This study measured the prevalence of evidence-based psychotherapy (EBP) templated notes in VA and tested the hypothesis that template use would be associated with care quality for posttraumatic stress disorder (PTSD). Across 130 facilities, an average of 3.6% of patients with a PTSD diagnosis received at least one EBP template in 2015. Among patients receiving psychotherapy for PTSD, an average of 8.5% received an EBP template. In adjusted models, facility-level EBP template use was associated with a greater proportion of PTSD-diagnosed patients treated in specialty clinics, greater facility-level rates of diagnostic assessment, and greater facility-level rates of psychotherapy adequacy.

Keywords Posttraumatic stress disorder · EBP · Evidence-based treatment · Template · VA · Veteran

Introduction

Posttraumatic stress disorder (PTSD) is a significant and growing concern for veterans and for the Veterans Health Administration (VHA) (VA 2013). An estimated 23% of returning veterans who use VHA services carry a diagnosis of PTSD (Fulton et al. 2015). According to VHA treatment guidelines, evidence-based psychotherapies (EBPs) including Prolonged Exposure (PE) and Cognitive Processing

Therapy (CPT) are recommended as effective, first-line interventions for PTSD (VA 2008, 2012; VA/DoD 2010). In order to address the burden of illness in a manner consistent with these guidelines, VHA has engaged in the largest dissemination and implementation effort of EBPs in the country (IOM 2015; Karlin and Cross 2014) and mandated that EBPs be offered to veterans with PTSD. To date, over 10,000 VHA clinicians have completed training in EBPs (Rosen et al. 2017). Offering EBPs for PTSD remains a priority for VHA and dissemination efforts are ongoing (Chard et al. 2012; Eftekhari et al. 2015, 2013; Rosen et al. 2017; Ruzek et al. 2015; Stirman et al. 2013).

Concurrent with EBP training and consultation, the use of EBP templated notes is an important part of ongoing care quality. The Institute of Medicine and the Department of Health and Human Services have adopted Donabedian's structure-process-outcome model (Donabedian 1988) for measuring quality of care (Brown et al. 2014; IOM 2015). This model defines three types of strategies for measuring quality of care: structural measures, process measures, and outcome measures (Donabedian 1988). Structural measures assess the capacity of providers or health care organizations to deliver care and monitor the outcomes of care (Brown et al. 2014). For example, the VHA maintains registries of EBP trained providers. Outcome measures assess improvements in outcomes among individuals who receive psychotherapy (Brown et al. 2014). For example, the VA Offices of Mental Health Operations and Mental Health Services are currently implementing a Measurement Based Care Initiative for PTSD and other mental health conditions (Kearney, Wray, Dollar, & King 2015; Landes et al. 2015; "Measurement Based Care (MBC) in Mental Health Initiative. <http://www.mirecc.va.gov/visn4/docs/MBCinMHInitiative.pdf>" 2016). Assessing completion of EBP templates is an example of a process measure because EBP templates measure

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whether psychotherapy is delivered with fidelity to an evidence-based model (Brown et al. 2014; IOM 2015). Templates can also facilitate quality improvement and adherence monitoring (Brown et al. 2014; Stirman et al. 2015) and can improve communication and collaboration among various mental health specialties (Cifuentes et al. 2015). They enable direct tracking of EBP usage (and are the only practicable method for doing so) and, with increasing availability of outcome data, could eventually enable assessments of the effectiveness of EBPs through examination of PTSD symptom change in VHA patients who receive them.

In recognition of the important role that EBP documentation plays, EBP templates have been mandated for those using EBPs in VHA as of October 2014 (Karlin and Cross 2014; VA 2014). However, rates of EBP use remain low. Data from the VHA national EBP implementation effort suggests that 70% of PE-trained therapists are continuing to deliver PE when surveyed 18 months after completing PE training, but to only 1–2 patients at a time (Rosen et al. 2017; Ruzek et al. 2015). In a post-training survey of CPT providers, 88% of VHA-trained CPT providers were using CPT, but 69% of those providers were using it “rarely” or “less than half the time” (Chard 2014). Furthermore, researchers using computer algorithms to classify free text notes in VHA’s electronic health record estimated that only 6.3% of New England VHA patients received PE or CPT in 2010 (Watts et al. 2014). A recent national survey of 128 PTSD clinic therapists revealed that these therapists provided significantly more supportive care than evidence-based treatment (Finley et al. 2015). Rates of EBP implementation may vary substantially by facility, depending on the fit with existing practices (Stirman et al. 2015). Furthermore, although the use of EBP templates is mandated whenever EBPs are used in VHA, the actual rate of EBP template usage among EBP providers is unknown. To date, no research has examined rates of EBP template usage or systems-level factors associated with template usage. Thus, the current study had two primary aims. The first aim was to describe the prevalence of EBP template usage across VHA, and the second was to describe the characteristics of facilities using EBP templates for PTSD and assess whether EBP template usage related to other measures of care quality for PTSD. Lessons learned from the VHA have the potential to inform other health systems in their efforts to improve psychotherapy quality measurement.

Methods

EBP Note Templates

The VA EBP templates are structured note templates that can be embedded into progress notes in the electronic health

record. They list the essential components of each EBP session, which vary by type of EBP. They also include sections for standardized symptom assessments, session number, session location, and other standard progress note elements such as time in session. To describe EBP-specific content, the provider clicks on boxes corresponding to the relevant content to indicate what was delivered in the session. The selection of a content element automatically creates a corresponding data tag in the encounter information of the visit, making the content element accessible via the Corporate Data Warehouse, which provides national level reporting capabilities.

Data Source

The VA Corporate Data Warehouse provided data on patient demographic characteristics, medications, mental health service utilization, and EBP template usage. The local Institutional Review Board approved this study and granted a waiver of informed consent for access to protected health information. To assess PTSD EBP template usage, we included notes with a data tag in the Health Factors Domain that indicated provision of PE or CPT. Please see “Appendix” for a list of the PE- and CPT-related health factors that qualified for inclusion in the analysis.

Population

The cohort consisted of all VHA patients who received an outpatient PTSD diagnosis at a mental health encounter in fiscal year 2015 (N = 630,746). Patients were assigned to the parent facility where they received their first EBP template. If they did not receive any EBP templates, then they were assigned to the parent facility where they received the plurality of their mental health care in 2015.

Outcome Measure

The primary outcome measure was the facility-wide percentage of patients who received at least one EBP template. The denominator was the facility-wide number of patients who received an outpatient PTSD diagnosis at a mental health encounter (N = 630,746). As a sensitivity analysis, following Sayer and colleagues (Sayer 2015), we also calculated the proportion of PTSD psychotherapy recipients who received an EBP template. For this analysis, the denominator was the facility-wide number of patients who received at least one psychotherapy visit with PTSD denoted as the primary diagnosis (N = 270,277). Given that our analysis was cross-sectional, patients were not followed over time.

Independent Variables

Independent variables consisted of established care quality indicators (measured at the level of the facility) and other facility-level demographic characteristics. For all independent variables, we used the denominator of all patients who received an outpatient PTSD diagnosis at a mental health encounter ($N = 630,746$).

Care Quality Indicators

Guided by the framework of the American Psychiatric Association (APA 2012) and by VA's Mental Health Information System (VA 2008), we assessed care quality in four domains: specialty care, diagnostic assessment, adequate psychotherapy, and adequate medication. Seven care quality indicators were selected. The indicator of specialty care was the percentage of patients with at least two visits to either a specialized PTSD clinic or to a PTSD specialist in Fiscal Year 2015. The two indicators of diagnostic assessment were an evaluation in a specialized PTSD clinic and at least one self-report assessment via the PTSD checklist (PCL; a self-report measure of PTSD symptoms; Weathers et al. 1991). A PTSD clinic evaluation was counted if the patient received a Current Procedural Terminology code for a psychiatric evaluation and the provider code indicated that the clinician was a mental health provider assigned to a PTSD clinical team. Self-report assessment via the PCL was counted if the patient completed at least one PCL in 2015. The indicator of adequate psychotherapy was the percentage of psychotherapy recipients who received eight or more psychotherapy visits within 14 weeks of their first psychotherapy visit (Karlin and Cross 2014). The three indicators of adequate medication were the percentage of patients who received any benzodiazepines in 2015 (negative quality measure), percentage of patients with no psychosis diagnosis who received any antipsychotics in 2015 (negative quality measure), and the percentage of antidepressant-prescribed patients who received an adequate trial of antidepressant medication (a 72-day supply over any 90-day period with at least one refill). Following Abrams and colleagues (Abrams et al. 2013), the antidepressant measure included only antidepressants recommended by the VA PTSD clinical practice guidelines: citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine, sertraline, duloxetine, venlafaxine, and desvenlafaxine.

Facility-Level Demographic Characteristics

Variables included region (Northeast, Midwest, South, or West), urbanicity (rural or urban), number of patients in the facility with any PTSD diagnosis, average age, percentage of patients who were Caucasian, percentage of patients who

were Hispanic, and percentage of patients who were service connected at a level of 50% or higher. For each variable, we used the denominator of all patients who received an outpatient PTSD diagnosis at a mental health encounter ($N = 630,746$).

Data Analysis

Bivariate analyses were used to examine the relationship between facility-level percentage of PTSD-diagnosed patients who received at least one EBP template and each of the independent variables, including quality indicators and other facility-level characteristics. We then conducted a generalized linear model with a logit link and the binomial family, including the robust option. The outcome was the facility-level percentage of PTSD-diagnosed patients who received at least one EBP template. Facility-level care quality measures and demographic variables that were significant in bivariate analyses were included as covariates. As a sensitivity analysis, we conducted the same set of procedures with the outcome of facility-level percentage of PTSD psychotherapy recipients who received at least one EBP template. We also assessed the number of EBP templates that were PE versus CPT and the number of visits that were group psychotherapy versus individual psychotherapy. Psychotherapy format (group versus individual) was determined from Current Procedural Terminology codes. Finally, we assessed the percentage of EBP templates that included evaluation and management services (indicating that the visit was provided by a prescriber) and the association between facility-level therapy adequacy and facility-level ratio of CPT to PE templates.

Results

Across the 130 facilities, the mean number of patients with a PTSD diagnosis from a mental health encounter was 4852 ($SD = 3,079.2$, range 797–15,011). The mean number of patients who had at least one psychotherapy visit with a primary PTSD diagnosis was 2079 ($SD = 1318.2$, range 1–7218). The mean facility-level numbers of psychotherapy encounters and EBP visits are reported in Table 1. Overall, among patients who received a PTSD diagnosis at a mental health encounter ($N = 630,746$), an average of $3.62 \pm 2.32\%$ of a facility's patients received an EBP template (see Table 2). Among the subset of patients who received psychotherapy for PTSD ($N = 270,277$), an average of $8.49 \pm 5.77\%$ of a facility's patients received an EBP template. Less than 1% of EBP templates (0.86%) were associated with visits to prescribers (e.g., psychiatrists, nurses, or physician assistants), and 13.1% were group psychotherapy encounters. The majority of EBP templates were CPT templates (73%) versus

Table 1 Descriptive characteristics of psychotherapy encounters and evidence-based psychotherapy templates (EBP) for PTSD across facilities ($N=130$)

	M	SD	Min	Max	Median	Interquartile range
All psychotherapy encounters	16,323.23	10,877.49	1	68,146	13,726.5	12,477
Individual psychotherapy	8066.90	4979.94	1	37,606	6788	5923
Group psychotherapy	8256.33	6866.59	0	40,854	6759	8109
Evidence-based psychotherapy						
Cognitive processing therapy	718.08	695.76	0	4352	490	777
Prolonged exposure therapy	238.15	260.80	0	1549	152	235
Individual EBP psychotherapy	785.47	673.76	0	3710	570	756
Group EBP psychotherapy	173.10	324.84	0	1909	30	206

Of the two evidence-based psychotherapies, only cognitive processing therapy is delivered in a group format. Prolonged exposure therapy is delivered only in an individual format

Table 2 Descriptive characteristics of EBP use, care quality measures, and other facility-level characteristics among patients in the facility who received a PTSD diagnosis at a mental health encounter ($N=130$ facilities)

	M	SD	Min	Max
Percent of patients who received a PTSD EBP template	3.62	2.32	0	12.39
Percent of patients with at least two visits to a specialty PTSD clinic	21.20	11.32	0	49.71
Percent of patients with a PTSD clinic evaluation	3.41	4.06	0	30.20
Percent of patients who completed a PTSD checklist measure	15.36	9.37	2.44	64.36
Percent of patients who received adequate psychotherapy	13.54	6.56	0	39.58
Percent of patients who received benzodiazepines	24.41	7.78	5.02	66.68
Percent of patients who received antipsychotics	16.79	4.63	5.98	38.81
Percent of antidepressant-prescribed patients with adequate medication continuation	74.32	6.03	57.03	86.31
Number of patients with a PTSD diagnosis	4851.89	3079.15	797	15,011
Average age	53.06	2.20	46.65	58.06
Percent Caucasian	73.52	16.70	25.64	96.97
Percent Hispanic	7.62	11.89	0.35	92.34
Percent of patients who were service connected at 50% or greater	79.78	5.23	64.46	96.49

PE templates (27%). There was not a significant association between the percentage of PTSD-diagnosed patients who received an adequate dose of psychotherapy and the percentage of EBP-templated visits that were CPT versus PE.

Primary Outcome Measure: Proportion of PTSD-Diagnosed Patients that Received an EBP Template

Bivariate analyses revealed significant positive correlations between the percentage of PTSD-diagnosed patients that received an EBP template and the percentage of patients with at least two visits to a specialized PTSD clinic or PTSD specialist ($r = .25, p = .005$), percentage of patients who received at least one PTSD checklist administration ($r = .28, p = .001$), and percentage of patients who received at least 8 psychotherapy visits within 14 weeks of their first psychotherapy visit ($r = .21, p = .01$). There were significant negative correlations with average patient age ($r = -.27, p = .002$) and percentage of patients who were service connected at a level of 50% or higher

($r = -.29, p < .001$). In addition, the facility-level percentage of patients receiving EBP templates varied by region ($\chi^2 = 14.86, p = .002$). In Midwest facilities, 5.10% of PTSD-diagnosed patients received an EBP template; in Southern facilities, 3.61% received a template; in Northeast facilities, 2.98% received a template, and in Western facilities, 2.88% received a template.

In adjusted models, facilities with a greater proportion of patients with at least two visits to a specialized PTSD clinic/PTSD specialist, facilities with a greater proportion of patients who received a PTSD checklist administration, and facilities with a greater proportion of patients who received at least 8 psychotherapy visits within 14 weeks of their first psychotherapy visit were more likely to have a higher percentage of PTSD-diagnosed patients receiving EBP templates (see Table 3). In addition, facilities in the Midwest administered templates to a greater percentage of patients than facilities in the Northeast. Facilities with a greater percentage of patients who were service connected at 50% or higher administered EBP templates to a smaller proportion of PTSD-diagnosed patients.

Table 3 Generalized linear model predicting percentage of PTSD-diagnosed patients who received PTSD EBP templates in a PTSD clinic ($N=130$)

	β	SE	Z	p
Percent of patients with at least two visits to a specialty PTSD clinic	1.04	0.46	2.27	0.023
Percent of patients with a PTSD checklist administration	1.15	0.42	2.72	0.007
Percent of patients with adequate psychotherapy	1.67	0.81	2.05	0.040
Region (reference = northeast)				
Midwest	0.33	0.14	2.36	0.018
West	-0.16	0.15	-1.05	0.296
South	0.25	0.14	1.82	0.069
Percent service connected at 50% or greater	-2.57	1.17	-2.19	0.028
Average age	-0.05	0.028	-1.68	0.094

Sensitivity Analysis: Proportion of Psychotherapy Recipients that Received an EBP Template

Bivariate analyses revealed significant positive correlations between the percentage of patients receiving PTSD-related psychotherapy that received an EBP template and the percentage of patients with at least two visits to a specialized PTSD clinic or PTSD specialist ($r = .20, p = .02$), percentage of patients who received at least one PTSD checklist administration ($r = .22, p = .01$), and percentage of patients who received at least 8 psychotherapy visits within 14 weeks of their first psychotherapy visit ($r = .25, p = .004$). There were significant negative associations between the percentage of psychotherapy recipients who received an EBP template and average patient age ($r = -.23, p = .009$) and percentage of patients who were service connected at a level of 50% or higher ($r = -.25, p = .004$). In addition, the facility-level percentage of psychotherapy recipients who received EBP templates varied by region ($\chi^2 = 15.68, p = .001$). In Midwest facilities, 11.9% of psychotherapy recipients received an EBP template; in Southern facilities, 8.8% received a template; in Northeast facilities, 6.8% received a template, and in Western facilities, 6.6% received a template.

In adjusted models, facilities with a greater proportion of psychotherapy recipients receiving at least 8 psychotherapy visits within 14 weeks administered templates to a greater percentage of psychotherapy recipients ($\beta = 2.66, SE = 0.96, Z = 2.78, p = .005$). In addition, facilities in the Midwest ($\beta = 0.42, SE = 0.15, Z = 2.77, p = .006$) and South ($\beta = 0.38, SE = 0.16, Z = 2.34, p = .019$) administered templates to a greater percentage of psychotherapy recipients than facilities in the Northeast.

Discussion

In the current study, we examined the frequency of EBP template usage across VHA facilities, the association between EBP template usage and other care quality measures, and the association between EBP template usage and

other facility-level characteristics. We found that facilities with a greater proportion of PTSD-diagnosed patients seen in specialty PTSD clinics, facilities with a greater proportion of patients receiving diagnostic assessment for PTSD, and facilities with a greater proportion of patients receiving adequate doses of psychotherapy also administered templates to a greater percentage of their PTSD-diagnosed patients. Overall, the reach of EBP template usage was low (3.6% among all PTSD-diagnosed patients and 8.5% among psychotherapy recipients). Thus, our results indicate that greater efforts are needed to improve rates of EBP template usage. Template usage is mandated in VHA (Karlin and Cross 2014; VA 2014) and recommended by the Institute of Medicine (IOM 2015) and the Department of Health and Human Services (Brown et al. 2014). Methods to improve uptake of EBP templates, particularly in places where reach is very low, require further study.

Low rates of EBP template usage may reflect low rates of EBP delivery. Recent research has identified several reasons for low use of EBPs in VHA. Commonly reported barriers to EBP implementation include lack of prioritization or allocation of resources to EBPs (Cook et al. 2015), high provider workload (Chard et al. 2012; Finley et al. 2015; Rosen et al. 2017; Ruzek et al. 2015), and lack of trained providers (Barnett et al. 2014; Hamblen et al. 2015). Other reported barriers include less scheduling control by providers (Ruzek et al. 2015), lack of patient flow in provider caseloads (Rosen et al. 2017; Ruzek et al. 2015), and low provider knowledge or unfavorable beliefs about the effectiveness of PE/CPT (Finley et al. 2015; Rosen et al. 2017; Ruzek et al. 2015). Provider-level barriers include perceptions that patients are not “ready” for PE/CPT (Barnett et al. 2014; Cook et al. 2014; Hamblen et al. 2015; Zubkoff et al. 2016) and perceived patient unwillingness to undergo PE/CPT (Barnett et al. 2014; Cook et al. 2014; Hamblen et al. 2015; Lu et al. 2016; Osei-Bonsu et al. 2016; Zubkoff et al. 2016). Elucidating barriers to EBP delivery will be critical to help VHA adapt and modify its implementation strategies. Quality improvement efforts designed to address these barriers

should consider use of the EBP template to measure improvements in EBP delivery.

In addition to EBP delivery barriers, there may be additional barriers in the use of EBP templates. First, templates may impose an additional documentation burden for providers because the templates require providers to describe very specific elements of the treatment session (Brown et al. 2014). Second, the EBP templates are incompatible with the “group notes” feature in VHA’s electronic health record. A template must be individually completed for each group member, because copying and pasting from one progress note to another will not transfer the associated health factors. This may be particularly problematic for sites where most psychotherapy, including evidence-based psychotherapy, is delivered in a group format. Finally, it is possible that templates may not contain locally required documentation elements. Poor documentation of EBPs could have detrimental effects on measurement-based care initiatives or on EBP implementation and dissemination efforts. Thus, barriers to EBP documentation merit further study and consideration. For example, future work could assess provider perceptions of template utility and usability.

We found that greater rates of documented diagnostic assessment via the PCL were associated with greater rates of EBP template usage. Diagnostic assessment is an important element of measurement-based care (Kearney et al. 2015). Thus, in line with our hypothesis, one process measure of care quality (diagnostic assessment) was associated with another process measure (EBP template). However, rates of PCL administration for PTSD-diagnosed patients in VHA are very low (fewer than 1% receive regular PCL assessment; Sripada et al. 2017), and the version of the PCL that corresponds to the latest DSM 5 diagnostic criteria was not available in the electronic health record until 2016. The measurement-based care initiative currently underway at VHA, in conjunction with the implementation of the most recent version of the PCL in Mental Health Assistant in the electronic health record, may facilitate greater PCL administration in VHA.

We also found that the proportion of PTSD-diagnosed patients seen in a PTSD clinic or by a PTSD specialist was associated with EBP template usage. Greater rates of treatment in PTSD clinics may facilitate evidence-based treatment for PTSD. It is also possible that facilities with more resources can accommodate more patients in their PTSD clinics or provide the training and dedicated time for providers to administer EBPs. Future work is needed to assess the association between facility resources and EBP delivery.

Facilities with greater rates of psychotherapy adequacy also administered EBP templates to a greater proportion of their PTSD-diagnosed patients and their psychotherapy recipients. Although most of the psychotherapy delivered across facilities was not EBP (or did not use an EBP

template), it is possible that greater engagement in psychotherapy across a facility may facilitate a greater rate of EBP delivery.

Our analysis revealed strong regional differences in EBP template usage. These regional differences were also found by Sayer and colleagues, who used computer algorithms to identify instances of EBP use or discussion and suggested that EBP reach may be particularly low in the Northeast (Sayer 2015). Similarly, Watts and colleagues found that in New England, only 6% of VHA patients who presented to a PTSD clinic during the first half of 2010 went on to receive an EBP within six months (Watts et al. 2014). It is possible that there are regional differences in receptivity to PTSD EBPs among mental health providers and administrators. Further study of this phenomenon is warranted, potentially through survey or qualitative methods.

Of note, we did not find the rate of evidence-based medication continuation to be associated with template usage. It is possible that medication prescription may be driven by prescriber-level factors; whereas, EBPs may be driven by factors specific to those providers who deliver psychotherapy. Since prescribers only provide 0.9% of EBP templates, these factors may be largely non-overlapping.

There are several limitations to the current study. The primary limitation is that the rate of agreement between EBP template usage and actual EBP care is unknown, although EBP template usage is likely an underestimate of actual EBP care. Preliminary data from Sayer and colleagues using text mining of 1,002,721 psychotherapy chart notes across 138 healthcare systems from April 2011 to October 2012 indicated that 20.2% of psychotherapy patients received or discussed EBPs for PTSD (Sayer, July 2015). Furthermore, Sayer identified use or discussion of EBPs at every facility with a specialized PTSD clinic (Sayer 2015). In our data, 20% of these facilities did not use any note templates at all. Thus, it is unlikely that EBP templates are capturing all EBP usage. Future directions for template implementation include increasing awareness of templates and support with templates through local EBP coordinators. The templates could also be revised to enable easier integration with the group notes feature or to make required elements more easily distinguishable from non-required elements in an effort to reduce burden on providers. Template usage could also be incentivized (Brown et al. 2014). For example, template use could be incorporated into the quality indicators monitored by VA central office. A national focus on quality of care in addition to the current focus on access to care could also facilitate greater uptake. However, it is possible that incentivizing template use could lead to over reporting of EBP delivery. For example, some therapists might fill out a template even when they did not actually provide an EBP in session. Thus, if EBP template use were to be incorporated

into a VHA psychotherapy quality measure, the potential for gaming the templates would need to be evaluated.

Other limitations merit mention. Our analysis did not allow us to assess how often EBPs might have been offered but refused. Nor did our approach allow us to assess the quality of EBP delivery. Another limitation of our study is the use of ecologic data, which cannot fully account for biologic effects at the individual level (Morgenstern 1995). Further research is needed to identify patient-level variables associated with receipt of EBPs. Future efforts to evaluate EBP implementation should assess these factors. A longitudinal approach that assessed EBP template usage month by month could also provide helpful information on the reach and penetration of EBP template usage.

In conclusion, we found low overall rates of EBP template use, with differences by assessment practices, psychotherapy adequacy, and region. EBP template usage is important to measure and to improve for several reasons. EBP templates enable tracking of EBP usage, which is critical for VHA to be able to secure resources for continued EBP training and support efforts. EBP template usage demonstrates commitment to quality initiatives, and providers using templates are likely more adherent to EBP protocols. Templates might help clinicians sustain effectiveness of EBP delivery over time (Rosen et al. 2016). Finally, high-fidelity EBP template utilization will enable monitoring of therapeutic outcomes resulting from EBPs and the ability to differentiate outcomes between EBPs and other forms of psychotherapy, a task which was virtually impossible to enact on a system-wide basis prior to their implementation. As Karlin and Cross (2014) note, the assessment of patient outcomes is one of the most important endpoints of a large-scale dissemination and implementation effort. VHA is a model and pioneer for other US healthcare systems in its use of measurement-based care and of EBP dissemination (IOM 2015; Karlin and Cross 2014). To continue to lead the charge, future work is needed to find ways to increase utilization of EBP templates.

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Compliance with Ethical Standards

Conflict of interest All the authors declare that they have no conflict of interest.

Informed Consent The VA Ann Arbor Healthcare System Institutional Review Board approved this study and granted a waiver of informed consent for access to protected health information.

Research Involving Human and Animals Participants All procedures performed in studies involving human participants were in

accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Appendix: Documentation of Evidence-Based Psychotherapy and Care Quality for PTSD in the Department of Veterans Affairs

See Tables 4 and 5.

Table 4 EBP health factors types indicating provision of cognitive processing therapy (CPT)

Health Factor Type	Frequency
MH CPT 1 INITIAL	12,446
MH CPT 11 ESTEEM	5280
MH CPT 12 FINAL	5402
MH CPT 2 MEANING	11,520
MH CPT 3 ABC SHEET	10,469
MH CPT 4 TRAUMA EVENT	8164
MH CPT 5 REWRITE EVENT	8093
MH CPT 6 CHALLENGE QUESTION	8198
MH CPT 7 PROBLEM THINK	7395
MH CPT 8 SAFETY	6560
MH CPT 9 TRUST	5750
MH CPT SESSION NUMBER 1	11,636
MH CPT SESSION NUMBER 10	5071
MH CPT SESSION NUMBER 11	4865
MH CPT SESSION NUMBER 12	4470
MH CPT SESSION NUMBER 13	656
MH CPT SESSION NUMBER 14	263
MH CPT SESSION NUMBER 15	198
MH CPT SESSION NUMBER 2	11,051
MH CPT SESSION NUMBER 3	9848
MH CPT SESSION NUMBER 4	8751
MH CPT SESSION NUMBER 5	8056
MH CPT SESSION NUMBER 6	7306
MH CPT SESSION NUMBER 7	6679
MH CPT SESSION NUMBER 8	6003
MH CPT SESSION NUMBER 9	5446
MH CPT SESSION NUMBER COMPLETED 1	28
MH CPT SESSION NUMBER COMPLETED 10	19
MH CPT SESSION NUMBER COMPLETED 11	12
MH CPT SESSION NUMBER COMPLETED 13	5
MH CPT SESSION NUMBER COMPLETED 18	1
MH CPT SESSION NUMBER COMPLETED 2	23
MH CPT SESSION NUMBER COMPLETED 3	35
MH CPT SESSION NUMBER COMPLETED 4	24
MH CPT SESSION NUMBER COMPLETED 5	21
MH CPT SESSION NUMBER COMPLETED 7	24
MH CPT SESSION NUMBER COMPLETED 8	15

Table 5 EBP health factors types indicating provision of prolonged exposure therapy (PE)

Health Factor Type	Frequency
EBP PE FOLLOW UP SESSION	201
EBP PE FOLLOWUP SESSION	18
MH PEI 1 INITIAL	4425
MH PEI 2ND SSN	6288
MH PEI 3RD SSN	3528
MH PEI 4 IMAGINAL SSN	15,126
MH PEI SESSION NUMBER 1	4199
MH PEI SESSION NUMBER 10	1048
MH PEI SESSION NUMBER 11	708
MH PEI SESSION NUMBER 12	518
MH PEI SESSION NUMBER 13	334
MH PEI SESSION NUMBER 14	246
MH PEI SESSION NUMBER 15	166
MH PEI SESSION NUMBER 16	112
MH PEI SESSION NUMBER 17	79
MH PEI SESSION NUMBER 18	60
MH PEI SESSION NUMBER 19	49
MH PEI SESSION NUMBER 2	5511
MH PEI SESSION NUMBER 20	38
MH PEI SESSION NUMBER 3	3742
MH PEI SESSION NUMBER 4	3150
MH PEI SESSION NUMBER 5	2490
MH PEI SESSION NUMBER 6	2153
MH PEI SESSION NUMBER 7	1957
MH PEI SESSION NUMBER 8	1611
MH PEI SESSION NUMBER 9	1341
MH PEI SESSION NUMBER > 20	144

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