

**Mental Health Parity and Addiction Equity Act (MHPAEA):
A Scoping Review**

**Elizabeth Kreuze, Ph.D. Candidate, RN
Medical University of South Carolina, College of Nursing**

Mental Health Parity and Addiction Equity Act (MHPAEA): A Scoping Review

Introduction: The Mental Health Parity and Addiction Equity Act (MHPAEA) requires group health plans and health insurance issuers provide mental health and substance use disorder financial requirements and treatment limitations that are no more restrictive than the predominant financial requirements or treatment limitations applied to substantially all medical/surgical benefits.

Methods: Information databases (i.e., PubMed, PsycINFO, CINAHL, PBSC, Business Source Premier) were systematically searched to identify studies evaluating MHPAEA effects on employer-sponsored health plans, employers, employees, and employee dependents.

Results: In total, $n=15$ studies and surveys were included. MHPAEA effects were predominately assessed in terms of behavioral health products, contracting, and coverage, and scope of service, quantitative financial requirements/treatment limitations, non-quantitative treatment limitations, service use, out-of-pocket spending, and total spending.

Conclusion: The distribution of products offered by health plans remained stable, and the most frequent change to services included expansion of benefits. More restrictive quantitative and non-quantitative financial requirements and treatment limitations generally declined. Service use and out-of-pocket spending findings were somewhat variable, although total spending generally increased modestly. Taken together, current evidence may represent conservative findings, because interim final regulations have primarily been evaluated, and not final regulations. Additional research may enhance ongoing Affordable Care Act (ACA) policy evaluations, while enhancing the ability of policymakers to implement efficient and effective health care practices.

Background

The Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA) requires group health plans and health insurance issuers provide mental health (MH) and substance use disorder (SUD) financial requirements (e.g., copayments, coinsurance, deductibles, out-of-pocket maximums) and treatment limitations (e.g., visit limits, annual limits, lifetime limits) that are no more restrictive than the predominant financial requirements or treatment limitations applied to substantially all medical/surgical benefits (i.e., “substantially all/predominant test”; Centers for Medicare and Medicaid Services [CMS], 2016a; Department of Labor [DOL], 2010; Substance Abuse and Mental Health Services Administration [SAMHSA], 2016). Parity must be applied in six classifications of benefits, including in- and out- of network inpatient care, in- and out- of network outpatient care, emergency care, and prescription drugs (CMS, 2016a; Government Accountability Office [GAO], 2011). The MHPAEA enhances protections for participants receiving group health plans by imposing the following: ensuring MH/SUD annual and lifetime dollar limits are not less favorable than limits on medical/surgical benefits; MH/SUD benefits may not be subject to any separate cost-sharing requirements or treatment limitations that apply only to such benefits; if a group health plan or health insurance coverage includes medical/surgical benefits and MH/SUD benefits, and the plan provides for out-of-network medical/surgical benefits, it must also provide for out-of-network MH/SUD benefits; and, standards for medical necessity determinations and reasons for any denial of MH/SUD benefits must be disclosed upon request (CMS, 2016a).

Final MHPAEA regulations became applicable for plan years beginning on or after July 1, 2014 and final regulations became effective on January 13, 2014, with the exception of technical amendments 29 CFR 2590.715-2719 and 45 CFR 147.136, which became effective on December 13, 2013 (DOL, 2016; Federal Register, 2013). The MHPAEA applies to non-Federal governmental plans with more than 50 employees, group health plans of private employers with more than 50 employees, and health insurance coverage in the individual health insurance market (CMS, 2016a). Alternatively, the MHPAEA does not apply to issuers who sell health insurance policies to employers with 50 or fewer employees or who sell health insurance policies to individuals (CMS, 2016a; DOL, 2010). Additional MHPAEA exceptions include: self-insured non-Federal governmental plans with fewer than 50 employees; self-insured small private employers with 50 or fewer employees; group health plans and health insurance issuers exempt based on their increased cost (i.e., 2% in year one and 1% in any subsequent year, based on actual claims data); large, self-funded non-Federal governmental employers that provide self-funded group health plan coverage to their employees (i.e., coverage that is not provided through an insurer) (CMS, 2016a).

The Affordable Care Act (ACA) extended the MHPAEA, mandating coverage of MH/SUD services as one of the ten essential health benefit (EHB) categories in non-grandfathered individual and small group plans (CMS, 2016a; CMS, 2016b; SAMHSA, 2016). Small group and individual market plans offered through the Health Insurance Marketplace must include MH/SUD coverage as one of the ten EHB, and that coverage must comply with federal parity requirements (SAMHSA, 2016). However, the MHPAEA

does *not* mandate large group health plans and health insurance issuers provide MH/SUD benefits (DOL, 2010; SAMHSA, 2016). The MHPAEA applies specifically to group health plans or health insurance issuers that voluntarily include MH/SUD benefits in addition to medical/surgical benefits, and does not apply if MH/SUD benefits are not offered (CMS, 2016a; DOL, 2010).

Significance

According to the 2014 National Survey on Drug Use and Health (SAMHSA, 2015a), 21.5 million people (8.1%) aged 12 years and older experienced past year SUD, including 17.0 million with an alcohol use disorder, 7.1 million with an illicit drug use disorder, and 2.6 million with co-occurring alcohol use and illicit drug use disorder. Further, approximately 1 in 5 adults aged 18 years and older (43.6 million, 18.1%) had any mental illness (AMI) in the past year, and 9.8 million (4.1%) experienced serious mental illness (SMI) (SAMHSA, 2015a). Finally, 7.9 million adults (3.3%) aged 18 years and older had co-morbid AMI and SUD in the past year, and 2.3 million (1.0%) experienced co-morbid SMI and SUD (SAMHSA, 2015a).

Behavioral health (BH) disorders (i.e., SUD and MH disorders) impact millions of Americans and impose serious implications. BH disorders result in disease burden that is among the highest of all diseases, in part, because SUD and MH disorders are the leading cause of disability worldwide (U.S. Department of Health and Human Services [HHS], 2017a; HHS, 2017b; World Health Organization [WHO], 2017). Because SUD and MH disorders are risk factors for suicide (Centers for Disease Control and Prevention [CDC], 2016b; HHS, 2017a; HHS, 2017b; National Institutes of Mental Health [NIMH], 2016; SAMHSA, 2015b; WHO, 2017), preventing and treating BH disorders is important, in part, because age-adjusted suicide in the U.S. increased 24% between 1999 and 2014 (CDC, 2016a). The MHPAEA requires plans voluntarily offering MH/SUD benefits include coverage at parity with included medical/surgical benefits. This review explores how implementation of the MHPAEA has impacted employer-sponsored health plans, employers (i.e., businesses) and plan recipients (i.e., employees, employee dependents).

Method

The literature review was conducted according to the Arskey and O'Malley (2005) framework. PubMed, Psychological Information Database (PsycINFO), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Psychology and Behavioral Sciences Collection (PBSC), and Business Source Premier were systematically searched to identify studies evaluating MHPAEA effects on employer-sponsored health plans, employers, employees, and employee dependents. Information databases were searched using the following keywords and medical subject heading (MeSH) terms searched with AND in combination with OR: *mental health parity and addiction equity act, MHPAEA, mental health, parity, addiction, equity, act, affordable care act, ACA, patient protection and affordable care act, PPACA, ObamaCare, federal parity, health plan, behavioral health, behavioral health disorder, substance use, substance abuse, substance misuse, mental disorder, expenditures, expense, cost, finance, financial, financing, business, employer, employer-sponsored, employee, enrollee, spouse, and dependent.*

The MHPAEA impact on employer-sponsored plans was specifically explored, because employers are the principal source of health insurance in the U.S. (Kaiser Family Foundation [KFF], 2016). Among employees at firms offering health benefits, 62% of employees are covered by health benefits through their own employer (KFF, 2016). Among employees in all firms, including firms that offer health benefits and firms that do not offer health benefits, 55% of employees are covered by health benefits offered by their employer (KFF, 2016). Maintaining an employer-sponsored health plan focus permits identification of trends affecting the majority of insured Americans. Studies and surveys reporting on plan structure, employer, employee, and employee dependent effects were included (i.e., all studies measuring actual MHPAEA impact were included).

Because actual impact was explored, articles evaluating perceived, estimated, and/or potential MHPAEA impact were excluded. Further, articles providing baseline BH data only, for which to compare future MHPAEA data were excluded because the MHPAEA was not evaluated nor were its effects assessed. In addition, studies providing state-specific parity evaluation data only were excluded, because these state-specific evaluations did not provide data on federal parity. Similarly, studies providing data on the initial Mental Health Parity Act (MHPA) of 1996, the legislation preceding the MHPAEA of 2008, were also excluded due to differences and variability in policy, provisions, and requirements.

Results

Fifteen studies and surveys formed the sample for and provided evidence for this review. The effects of the MHPAEA on employer-sponsored health plans were predominately assessed in terms of BH products, BH contracting, BH coverage, scope of service, quantitative financial requirements/treatment limitations, non-quantitative treatment limitations, service use, out-of-pocket spending, and total spending, with results organized accordingly.

Behavioral Health Products, Contracting, and Coverage

Between 2003 (pre-parity) and 2010 (parity), the distribution of products most commonly offered by health plans remained stable ($n=8,431$ insurance products, 89% response rate; Horgan et al., 2016b). In 2003, prevalent product types were Point-of-Service Products (POS, 35.3%), Preferred Provider Organizations (PPO, 35.2%) and Health Maintenance Organizations (HMO, 29.5%). In 2010, prevalent product types were similar; POS (35.7%), PPO (31%), and HMO (28.8%), and for the first time Consumer-Directed Products (CDP, 4.6%) were represented among the most commonly purchased products. In contrast, between 2003 and 2010 there were pronounced changes in contracting arrangements. In 2003, 72.4% of health plans contracted with external Managed Behavioral Health Organizations (MBHOs) to manage BH services (specialty external), 15.3% managed BH services internally (internal), and 12.3% used the same external vendor to manage both medical and BH services (comprehensive). However, in 2010, 69.5% of health plans used a specialty BH organization that was part of the same parent organization to manage behavioral health services (hybrid-internal), 15.4% used internal contracting arrangements, and 14.7% utilized specialty external contracting arrangements (Horgan et al., 2016b).

In 2016 (post-parity), 83% of firms offering health benefits offered only one type of health plan; large firms (>200 workers) were more likely than small firms (3-199 workers) to offer more than one plan type (53% vs. 16%, respectively) ($n=1,933$ non-federal public and private firms, 40% response rate; KFF, 2016). Among firms offering only one plan type, covered employees in large firms were more likely to be offered PPO plans than covered employees in small firms (62% vs. 39%, respectively); in contrast, covered employees in small firms were more likely to be offered HMO (12%) and POS (22%) plans than covered workers in large firms (3% vs. 4%, respectively). Overall, enrollment remained highest in PPO plans (48%), followed by high deductible health plan with savings option (29%), HMO plans (15%), POS plans (9%), and conventional plans (<1%) (KFF, 2016).

Between 2011-2013 (parity), carve-out employers (i.e., medical benefits covered separately from MH/SUD benefits by another insurer/vendor) were larger, with more than half employing greater than 10,000 employees ($n=2,257$ plan-years, corresponding to $n=1,527$ “carve out” plans and 40 employers; Thalmayer, Friedman, Azocar, Harwood & Ettner, 2016). Alternatively, carve-in employers (i.e., medical and MH/SUD benefits covered together) were smaller, with more than half employing fewer than 5,000 employees ($n=11,644$ plan-years, corresponding to $n= 3,569$ “carve in” plans and 340 employers; Thalmayer et al., 2016). Most carve-out plans were PPO, while most carve-in plans were POS (Thalmayer et al., 2016).

Specialty BH care was covered in the most commonly purchased insurance packages in 2009 (pre-parity), as well as in 2010 (parity), and there were no significant differences in specialty BH coverage between 2009 and 2010 ($n=8,431$ insurance products, 89% response rate; Horgan et al., 2016a). However, there was a small but significant decline in out-of-network BH coverage. Although contracting arrangements evolved from 2003 to 2010 (Horgan et al., 2016b), when compared only to 2009, all insurance products retained the same type of BH contracting arrangements in 2010 (Horgan et al., 2016a). Compared to 2009, 79.8% of products reported including a larger BH provider network in 2010 (Horgan et al., 2016a).

Additionally, in a non-generalizable sample, 96% of employers reported offering coverage for MH/SUD in 2008 (pre-parity) as well as in 2010-2011 (parity) ($n=168$ employers, 24% response rate; GAO, 2011). Approximately 2% of employers reported offering coverage for only MH conditions in 2008 but not SUD, and they continued to offer coverage for only MH conditions in 2010-2011. However, 2% of employers reported discontinuing coverage of both MH/SUD or discontinuing only SUD in 2010-2011. One employer that discontinued MH coverage indicated they did so to control health insurance costs, while another employer discontinuing SUD coverage reported they did so because they did not want to provide coverage without treatment limitations (GAO, 2011).

Similarly, additional evidence suggested only a very small number of large and mid-sized employers or health plans responded to federal parity by eliminating MH/SUD coverage ($n=10,000$ plan designs for more than 300 clients; Goplerud, 2013). Specifically,

all plans offering MH/SUD benefits in 2009 (pre-parity) offered MH/SUD benefits in 2010-2011 (parity) (Goplerud, 2013).

Overall, the percentage of firms offering health benefits in 2016 (post-parity, 56%) was lower than in 2006 (pre-parity, 61%) (KFF, 2016). In 2016, 98% of large firms (>200 workers) offered health benefits to some employees, but small firms (3-199 workers) were significantly less likely to do so (55%). Among firms offering health benefits, 89% of small firms and 99% of large firms offered health benefits to spouses, and 88% of small firms and 100% of large firms offered health benefits to dependents. However, among firms offering health benefits, only 16% offered benefits to part-time employees (<30 hours per week), and 4% offered benefits to temporary workers (KFF, 2016).

Scope of Service

In 2010 (parity), respondents reported particular BH diagnoses were excluded from products offered by health plans, in particular, 22.4% excluded eating disorders, 7.6% excluded autism, and 1.5% excluded attention-deficit hyperactivity disorder (Horgan et al., 2016a). However, in 2010, no products excluded alcohol or drug use disorder diagnoses (Horgan et al., 2016a).

Similarly, in a non-generalizable sample, 34% of employers reported their most popular plan in 2010-2011 (parity) excluded at least one broad MH/SUD diagnosis from their benefits (GAO, 2011). Approximately 9% of employers also reported their most popular plan in 2010-2011 excluded at least one specific MH diagnosis subcategory within a broader MH diagnosis, and 2% additionally reported excluding at least one specific SUD subcategory. Employers reported commonly excluded diagnosis subcategories were developmental disorders, learning disorders, mental retardation, sexual deviation and dysfunction, and relational disorders. In contrast, over 90% of employers reported including five broad diagnoses in their most popular plan in 2008 (pre-parity) and 2010-2011: mental disorders due to a general medical condition, substance-related disorders, schizophrenia and other psychotic disorders, mood disorders, and anxiety disorders. Despite some exclusions, 91% of employers reported that MH/SUD diagnoses included in their most popular plan remained consistent between 2008 and 2010-2011, and the remaining 9% of employers reported including broader diagnoses. Overall, the most common change to MH/SUD benefits included enhancing and expanding benefits (GAO, 2011).

In addition to particular diagnosis exclusions, treatment exclusions were also present. Specifically, in this non-generalizable sample, 41% of employers reported excluding a specific treatment for MH/SUD in their most popular plan in 2010-2011 (parity), with treatment exclusions increasing 8% from 2008 (pre-parity) (GAO, 2011). Some employers excluded certain treatments related to MH/SUD diagnoses rather than excluding the actual diagnoses. Other employers excluded certain treatments due to concerns about treatment effectiveness (GAO, 2011).

Finally, in 2010 (parity), 90.8% of products included disease management programs for depression, while only 20.8% included disease management programs for

SUD (Horgan et al., 2016b). Together, inpatient hospitalization, detoxification, partial hospital, intensive outpatient, and outpatient counseling services for MH and SUD conditions were covered by nearly all products in 2010 (Horgan et al., 2016b).

Quantitative Financial Requirements/Treatment Limitations

In a non-generalizable sample, there was a 28% reduction in reported limits on the number of allowed MH office visits from 2008 (pre-parity, 35%) to 2010-2011 (parity, 7%), and a 20% reduction in reported limits on the number of allowed MH inpatient days from 2008 (29%) to 2010-2011 (9%) (GAO, 2011). Further, there was a 25% reduction on reported limits on the number of allowed SUD office visits from 2008 (33%) to 2010-2011 (8%), and a 19% reduction in reported limits on the number of allowed SUD inpatient days from 2008 (27%) to 2010-2011 (8%). Additionally, there was a 15% reduction in reported lifetime dollar limits on treatments for MH/SUD from 2008 (20%) to 2010-2011 (5%). Employers also reported cost sharing, copayments, and coinsurance for office visits with in-network providers remained relatively stable from 2008 to 2010-2011. In 2010-2011, the average copayment for an in-network MH office visit was \$26 and the average in-network coinsurance was 19%. Comparatively, in 2010-2011, the average in-network copayment for a SUD office visit was \$27 and the average in-network coinsurance was 19% (GAO, 2011).

Similarly, 10-16% of plans offered more restrictive inpatient financial requirements (i.e., copayments, coinsurance) in 2009 (pre-parity), and 7% of mid-sized employers continued non-compliant requirements in 2010-2011 (parity), while virtually all plans offered by large employers complied in 2010-2011 (Goplerud, 2013). Further, 20-50% of plans offered by large employers and up to 84% of plans offered by mid-sized employers imposed more restrictive MH/SUD inpatient benefits in 2009, declining to 10-13% in 2010-2011. More restrictive outpatient financial requirements were also present in 2009, and 20% of plans offered by large employers and 40% of plans offered by mid-sized employers continued non-compliance in 2010-2011. Further, up to 50% of large employers and 81% of mid-sized employers imposed unequal outpatient visit limits in 2009, declining to 7-13% in 2010-2011. Likewise, 20% of plans required higher cost sharing for BH emergency services than other medical services in 2009, however, all plans complied with cost sharing and treatment limitation requirements in 2010-2011. Despite variable compliance, there was no evidence that plans increased medical/surgical financial requirements in order to achieve parity (Goplerud, 2013).

In 2008-2009 (pre-parity), 66% of carve-out plans with in- or out- of network benefits had annual limits on inpatient or immediate care for MH or SUD or both, and 89% had an annual limits on outpatient visits (Thalmayer et al., 2016). For carve-out plans with in-network-only benefits, 74% imposed annual limits on inpatient and immediate care, and 90% imposed annual limits on outpatient visits. Comparatively, in 2008-2009, 73% of carve-in plans had an annual inpatient or intermediate limit, and 77% imposed an annual outpatient limit. However, most limits were removed in 2010 (transition year), and virtually all limits were removed by 2011-2013 (parity). Specifically, in 2011-2013, less than 1% of carve-out plans retained limits, while 3% of carve-in plans retained limits (Thalmayer et al., 2016).

More generally, the proportion of products with special annual limits on outpatient MH care declined significantly from 2009 (pre-parity, 27.8%) to 2010 (parity, 4%) (Horgan et al., 2016a). The proportion of products with special annual limits on outpatient SUD care also decreased significantly from 2009 (25.6%) to 2010 (2.7%). In 2010, mean in-network coinsurances were lower for BH care (13.3%) than for general medical care (20.8%). However, in 2010, mean in-network copayments were higher for BH care (\$25.40) than for general medical care (\$21.50). Assuming a typical visit fee of \$130, in 2010, 10.1% of products had higher in-network cost sharing for BH care than for general medical care (Horgan et al., 2016a).

Further assessing BH cost sharing, in 2010 (parity), 73.7% of products required copayments while 24.5% of products required coinsurance (Horgan et al., 2016b). In 2010, 48.7% of products required high patient cost sharing for BH services, requiring more than a \$20 copayment or 20% coinsurance (Horgan et al., 2016b).

More specifically, compared to 2008-2009 (pre-parity), a significantly lower proportion of in-network-only and in-and-out-of network plans required copayments for office-based professional services in 2011-2013 (parity) ($n=12,163$ plan-years, $n=3,822$ “carve-in” plans, $n=385$ employers; Friedman et al., 2016). The proportion of in-and-out-of-network plans requiring inpatient copayments also decreased significantly. Despite decreases in the proportion of plans requiring copayments, among in-and-out-of-network plans, the average inflation-adjusted copayment increased significantly from 2008-2009 (\$282) to 2011-2013 (\$315); no significant changes were seen in inpatient copayments among in-network-only plans. Parity was associated with an average increase of \$15.92 in intermediate care copayments among in-network-only plans. While inpatient and intermediate care inflation-adjusted copayments increased, average office-based professional copayments decreased for in-network-only (\$29 pre-parity, \$24 parity) and in-and-out-of-network (\$28 pre-parity, \$26 parity) plans. In 2011-2013, among all in-and-out-of-network plans, office-based professional copayments were \$2.50 less than in 2008-2009 (Friedman et al., 2016).

Alternatively, among in-network-only and in-and-out-of-network plans, average coinsurances for in-network inpatient services increased 1% from 2008-2009 (pre-parity) to 2011-2013 (parity), a small but significant increase (Friedman et al., 2016). Significant comparable increases for out-of-network inpatient coinsurances were found among in-and-out-of-network plans. Further, among in-and-out-of-network plans, average in-network coinsurances for immediate care had a small but significant increase from 2008-2009 (16.8%) to 2011-2013 (17.4%); in contrast, small but significant decreases in in-network coinsurance were observed for in-network-only plans from 2008-2009 (18.2%) to 2011-2013 (17.6%). On average, in-and-out-of-network plans required higher out-of-network intermediate care coinsurance in 2011-2013 (38%) than 2008-2009 (36%). Among in-and-out-of-network plans, the average 2011-2013 in-network coinsurance for office-based professional services decreased 2-3%, a significant decrease from 2008-2009; similarly, in-network-only in-network coinsurance for office-based professional services non-significantly decreased from 2008-2009 to 2011-2013. Alternatively, among in-and-out-

of-network plans, there was a small but significant 1% increase in out-of-network coinsurance for office-based professional services (Friedman et al., 2016).

After combining effects, among all in-and-out-of-network plans inpatient in-network coinsurance was 1.32% higher in 2011-2013 (parity) than in 2008-2009 (pre-parity); average inpatient out-of-network coinsurances also increased 1.23% for in-and-out-of-network plans (Friedman et al., 2016). After combining effects, among all in-and-out-of-network plans, in-network coinsurance for intermediate care was 1.4% higher in 2011-2013 when compared to 2008-2009; similarly, out-of-network coinsurance for intermediate care was 1.28% higher among in-and-out-of-network plans. In contrast, parity was associated with a 1.7% decrease in in-network coinsurance for office-based professional services among select in-and-out-of-network plans; whereas out-of-network coinsurance for office-based professional services increased by 1% among all in-and-out-of-network plans when compared to 2008-2009 (Friedman et al., 2016).

Non-Quantitative Treatment Limitations

In 2009 (pre-parity), large employers frequently imposed stricter pre-certification requirements on MH/SUD benefits than medical/surgical benefits, medical necessity criteria were applied to MH/SUD benefits but not medical/surgical benefits, use of routine retrospective reviews were required for MH/SUD services and not medical/surgical services, and MH/SUD reimbursement rates were different than medical/surgical rates (Goplerud, 2013). In 2010-2011 (parity), 8% of employers reported adding to or increasing use of management techniques in response to MHPAEA implementation. Despite increases in management techniques, most health plan respondents indicated that the scientific contents of medical necessity criteria for MH/SUD coverage did not change as a result of the MHPAEA. Most health plan representatives reported standards for medical necessity criteria were applied (e.g., McKesson Interqual, American Society of Addiction Medicine), however, several representatives noted they also used other criteria if required by employer contracts (Goplerud, 2013).

In contrast, compared to 2009 (pre-parity), there were significant decreases in the proportion of products requiring prior authorization for outpatient MH treatment (14.2% vs. 4.7%) and SUD treatment (13.2% vs. 4.8%) in 2010 (parity) (Horgan et al., 2016a). Comparatively, the proportion of products requiring prior authorization for specialty outpatient medical care also declined significantly from 2009 (27.7%) to 2010 (16.3%). In 2009 and 2010, approximately 79% of products required continuing review, however, in 2010, continuing review requirements tightened, and reviews were conducted at strict intervals and/or with specified frequencies (Horgan et al., 2016a).

Service Use

Compared to 2007-2009 (pre-parity), in 2010-2012 (parity), the average number of out-of-network outpatient SUD visits per user increased significantly, from seven to thirteen visits per user ($n=525,620$ users of SUD services; McGinty et al., 2015). Parity was associated with a significant 8.7% increase in the probability of any use of out-of-network inpatient SUD services, among users of these services. Similarly, parity was

associated with a significant 4.3% increase in the probability of any use of out-of-network outpatient SUD services, among users of these services (McGinty et al., 2015).

When additionally evaluating individuals with SUD from 2007 (pre-parity) to 2010 (parity), in the 12- to 6- month pre-treatment period, individuals in high deductible health plans had significantly fewer inpatient days per 1,000 member months (32 vs. 49), significantly lower primary care visits (.27 vs. .36), and significantly fewer psychiatry visits (.09 vs. .12) when compared to individuals in no deductible health plans ($n=31,001$; Parthasarathy & Campbell, 2016). However, in the 6- to 0- months immediately prior to treatment entry, there were no differences in emergency department, inpatient, and psychiatry department visits between individuals in high deductible, low deductible, and no deductible health plans, and utilization increased in all three groups. In contrast, primary care visits remained significantly lower for high deductible health plan enrollees relative to no deductible enrollees (.40 vs. .46) in the 6- to 0- month period prior to treatment entry (Parthasarathy & Campbell, 2016).

In contrast, compared to 2009 (pre-parity) and a historical enrollee group (2009), there were no significant differences in the probability of using SUD treatment attributable to the MHPAEA in 2010 (parity) ($n=298,339$ enrollees in “carve-in” plans; Busch et al., 2014). When analyzing performance-based measures from 2009 to 2010, there was no significant effect on identification of SUD, treatment initiation, or treatment engagement associated with implementation of the MHPAEA (Busch et al., 2014).

Compared to 2008-2009 (pre-parity), assessment and diagnostic evaluation visits immediately increased in level during 2010 (transition year) ($n=1,812,541$ individuals in 10,010 “carve-out” plans; Ettner et al., 2016). However, in 2010, family psychotherapy visits immediately decreased in level. Outpatient medication management visits and individual psychotherapy visits also immediately decreased in level from 2008-2009 to 2010, however, these immediate decreases were followed by gradual increases in slope. Alternatively, when 2008-2009 was compared directly to 2011-2013 (parity), the probabilities of using any assessment and diagnostic evaluation visit (-.00002), medication management visit (-.00004), and family psychotherapy visit (-.00002) significantly decreased in slope. In contrast, when 2008-2009 was again compared to 2011-2013, the probability of using structured outpatient (.00012) and inpatient (.00007) care was significantly higher than would be expected based on pre-parity trends (Ettner et al., 2016).

When comparing 2008-2009 (pre-parity) to 2010 (transition year), there were significant increases in time trends for outpatient visits ($n=179,506,951$ “carve-in” member-month observations; Harwood et al., 2016). Specifically, for outpatient utilization, monthly per-member assessment and diagnostic evaluation visits (.00045) and individual psychotherapy visits (.00578) immediately significantly increased. However, changes in level and slope of monthly per-member structured outpatient care were variable, and there was an immediate significant decrease in outpatient care days (-.00059), followed by gradual but significant increases in outpatient care days per month (.00002). In contrast, when comparing 2008-2009 directly to 2011-2013 (parity), there were no significant changes in time trends of monthly per-member medication management visits, family

psychotherapy visits, day treatment, residential treatment, or inpatient utilization (Harwood et al., 2016).

Examining both enrollees and enrollee dependents from 2009 (pre-parity) to 2010 (parity), MH visits per subscriber significantly increased 12%, and MH visits per dependent concurrently significantly increased 11% ($n=43,855$; Grazier, Eisenberg, Jedele & Smiley, 2016). The number of subscribers with 31 or more MH visits increased 255% from 2009 ($n=29$) to 2010 ($n=103$), while the number of subscribers with exactly 30 MH visits decreased 74% from 2009 ($n=53$) to 2010 ($n=14$). Similarly, there was a 176% increase in the number of dependents with 31 or more MH visits between 2009 ($n=25$) to 2010 ($n=69$), while there was a 64% decrease in the number of dependents with exactly 30 MH visits from 2009 ($n=28$) to 2010 ($n=10$). Further, SUD outpatient visits by subscribers increased 20% between 2009 ($n=31$) and 2010 ($n=37$), and SUD visits by dependents also increased 8% between 2009 ($n=46$) and 2010 ($n=50$). During this period, the average number of annual medical visits increased only 1% among subscribers, and decreased 7% among dependents (Grazier et al., 2016).

Examining employee dependents (i.e., children aged 1 to 17 years) from 2006 (pre-parity) to 2011 (parity), child hospitalizations for MH disorders increased 67.4% when the expected payer was private insurance; similarly, hospitalizations increased 66.8% when the expected payer was Medicaid (n =unknown; Torio, Encinosa, Berdahl, McCormick & Simpson, 2015). From 2006 to 2011, child hospitalizations for suicide and self-injury increased 93.5% when the expected payer was private insurance, and increased 120.6% when the expected payer was Medicaid. While screening for MH status and hospitalizations for BH disorders increased among privately insured and Medicaid insured children, during this period, screening and hospitalizations decreased significantly among uninsured children. Further, compared to uninsured children and Medicaid insured children, only discharges (i.e., treat and release emergency department visits) for suicide and self-injury increased significantly among privately insured children, increasing 23.2% from 2006 ($n=39,906$) to 2011 ($n=49,159$) (Torio et al., 2015).

Out-of-Pocket Spending

Compared to 2007-2009 (pre-parity), in 2010-2012 (parity), there was no significant effect of the MHPAEA on out-of-pocket spending on out-of-network outpatient and inpatient SUD services (McGinty et al., 2015).

Similarly, compared to 2009 (pre-parity) and a historical enrollee group (2009), there was no significant effect of the MHPAEA on out-of-pocket spending on SUD treatment, or the proportion of spending paid for out-of-pocket among users (Busch et al., 2014).

Likewise, when comparing 2008-2009 (pre-parity) to 2011-2013 (parity), there were no significant changes in time trends of monthly per-member patient expenditures (Harwood et al., 2016).

Comparatively, relative to 2008-2009 (pre-parity), patient out-of-pocket-expenditures immediately decreased in level during 2010 (transition year) (Ettner et al., 2016). In 2010, the only significant change in time trends for the per-member-per-month expenditure outcomes was a significant decrease of -\$0.54 for patient out-of-pocket expenditures. When 2008-2009 was compared directly to 2011-2013 (parity), there was again a significant decline in level and slope for per-member-per-month out-of-pocket expenditures (-\$0.73). Specifically, in 2011-2013, per-member-per-month patient expenditures immediately significantly decreased -\$0.73, and additional decreases of -\$0.03 per month were observed. The likelihood of having any out-of-pocket expenditure significantly decreased both in level (-.00323) and slope (-.00023). Parity was associated with a level decrease of -\$21.58 in per-user-per-month patient expenditures (Ettner et al., 2016).

Alternatively, between 2009 (pre-parity) and 2012 (parity), annual growth in out-of-pocket spending increased fairly similarly for inpatient general medical care (13.8%) and inpatient BH care (10.9%) (n =unknown; Mark, Hodgkin, Levit & Thomas, 2016). Similarly, between 2009 and 2012, out-of-pocket spending increased for outpatient general medical care (9.6%) and outpatient BH care (5.4%). In contrast, between 2009 and 2012, out-of-pocket expenditures per prescription decreased for BH conditions (-3.5%) and also decreased for general medical conditions (-1.4%) (Mark et al., 2016).

Additionally, among enrollees and enrollee dependents utilizing MH services, out-of-pocket spending for copayments increased from 2009 (pre-parity, \$15.17) to 2010 (parity, \$23.10) among subscribers; out-of-pocket spending for copayments also increased from 2009 (\$11.75) to 2010 (\$17.16) among dependents (Grazier et al., 2016). Between 2009 and 2010, subscriber total out-of-pocket spending increased approximately 40% (Grazier et al., 2016).

In 2010 (parity), 89% of products had a deductible, and of these products, 74.7% reported having a common deductible for BH and general medical care, while the remaining 14.3% reported having two separate deductibles for BH and general medical care (i.e., MH/SUD and medical/surgical out-of-pocket costs did not accumulate toward a single deductible) (Horgan et al., 2016a).

Somewhat similarly, 3.2% of plans utilized separate deductibles for BH and general medical/surgical care in 2009 (pre-parity), however, only 1.3% of large employers and 3% of midsized employers continued to utilize separate deductibles in 2010-2011 (parity) (Goplerud, 2013).

Further, the proportion of plans requiring BH intermediate care deductibles that accumulated separately from the medical deductible in 2008-2009 (pre-parity) was 0.7%, and this separate requirement was 0.6% in 2011-2013 (parity) (Friedman et al., 2016).

Cumulatively, in 2016 (post-parity), average annual employee premium contributions for single coverage were \$1,129, and average annual employee contributions for family coverage were \$5,277 (KFF, 2016). Covered employees in small firms (3-199

workers) had a lower average premium contribution for single coverage (\$1,021 vs. \$1,176), but had a higher average contribution for family coverage (\$6,597 vs. \$4,719) than covered employees in large firms (>200 workers). Overall, average employee premium contributions for single and family coverage increased 80% and 78%, respectively, from 2006 (pre-parity) to 2016 (post-parity) (KFF, 2016).

In 2016, 83% of covered employees were enrolled in a health plan with a general annual deductible for single coverage (KFF, 2016). The general annual deductible for single coverage varied by plan type, and 54% of covered employees in HMO plans did not have a general annual deductible for single coverage, compared to 24% of employees in POS plans and 16% of employees in PPO plans. Covered employees in plans without a general annual deductible had other forms of cost sharing (e.g., cost sharing for hospital admissions, cost sharing for medical services). Overall, the share of covered employees in plans with a general annual deductible increased significantly over time, from 55% in 2006 (pre-parity), to 74% in 2011 (mid-parity), to 83% in 2016 (post-parity). Moreover, the average general annual deductible in 2016 was 300% higher than the average general annual deductible in 2006, increasing from \$584 in 2006, to \$991 in 2011, to \$1,478 in 2016 (KFF, 2016).

In 2016 (post-parity), 98% of covered employees were enrolled in a health plan with an out-of-pocket maximum for single coverage, representing a significant increase from 2011 (mid-parity) (KFF, 2016). To assist with out-of-pocket expenses not covered by the health plan, 28% of firms offered high deductible plans that were paired with an account (i.e., health reimbursement arrangements, health savings accounts), allowing enrollees to use tax-preferred savings to pay plan cost sharing and other out-of-pocket medical expenses. In 2016, the average annual out-of-pocket maximum for single coverage was \$4,264 for high deductible health plans with health reimbursement arrangements, and was \$4,083 for high deductible health plans with health savings accounts (KFF, 2016).

Total Spending

When evaluating individuals with SUD from 2007 (pre-parity) to 2010 (parity), in the 12- to 6- month pre-treatment period, individuals in low deductible health plans (\$25.97) and high deductible health plans (\$29.72) had significantly lower emergency department costs than individuals in no deductible health plans (\$40.73) (Parthasarathy & Campbell, 2016). Further, primary care costs were significantly lower for high deductible health plan enrollees (\$89.48) when compared to no deductible health plan enrollees (\$115.49). Alternatively, in the 6- to 0- months immediately prior to treatment entry, there were no differences in emergency department, inpatient, and psychiatry department visits between individuals in high deductible, low deductible, and no deductible health plans, and all three groups experienced increased costs. However, despite general increased costs, emergency department costs (\$66.65 vs. \$82.26) and primary care costs (\$136.19 vs. \$149.97) remained lower for individuals in high deductible health plans, compared to individuals in no deductible health plans (Parthasarathy & Campbell, 2016).

Similarly, average total spending on out-of-network inpatient and outpatient SUD services more than doubled from 2007-2009 (pre-parity) to 2010-2012 (parity) (McGinty et al., 2015). Parity significantly increased rates of average total spending on out-of-network inpatient SUD services by \$49.81 per user per month. Parity also significantly increased rates of average total out-of-network spending on outpatient SUD services by \$24.80 per user per month (McGinty et al., 2015).

Additionally, compared to 2009 (pre-parity) and a historical enrollee group (2009), there was a significant increase of \$9.99 in total spending on SUD treatment per enrollee attributable to the MHPAEA (Busch et al. 2014). However, in contrast, there was no significant difference in total spending on SUD treatment per user (Busch et al., 2014).

When comparing 2004-2009 (pre-parity) to 2009-2012 (parity), the average annual growth in spending per enrollee for general medical care declined (6.6% vs. 3.7%), while spending per enrollee for BH disorder treatments increased (4.8% vs. 6.6%) (Mark et al., 2016). From 2009 to 2012, average annual spending for BH treatment increased more quickly than treatment for general medical conditions in inpatient settings (9.6% vs. 3.5%) and also increased more quickly than treatment for general medical conditions in outpatient settings (10.9% vs. 4.2%). However, average spending per day for inpatient care rose more quickly for medical care (5.9%) than BH care (3.8%). Alternatively, from 2009 to 2012, spending on prescription drugs for treatment of BH disorders (1.9%) and general medical (2.4%) conditions grew at similar average annual rates (Mark et al., 2016).

When 2008-2009 (pre-parity) was compared to 2011-2013 (parity), a significant decline in slope for per-member-per-month total expenditures was observed (-\$0.06; Ettner et al., 2016). Further, the probability of having any total expenditure significantly decreased in slope in 2011-2013, when compared to 2008-2009 (-.00014). However, during this period, an immediate significant increase in level of per-member-per-month plan expenditures was observed (\$1.78). Parity was associated with a significant level increase of \$58.03 in per-user-per-month plan expenditures (Ettner et al., 2016).

Focusing on 2011-2013 (parity) in particular, the MHPAEA was associated with significant increases in the time trends of monthly per-member total and plan spending (Harwood et al., 2016). Specifically, monthly per-member total expenses immediately significantly increased \$1.05, and monthly per-member plan expenditures immediately significantly increased \$0.88 (Harwood et al., 2016).

Among enrollees and enrollee dependents, spending by the health plan for MH visits increased 9% from 2009 (pre-parity, \$68.67) to 2010 (parity, \$74.88) among subscribers with a MH visit; plan spending for visits by dependents with a MH visit simultaneously increased 11% from 2009 (\$56.81) to 2010 (\$62.81) (Grazier et al., 2016). Similarly, during this period, plan expenditures for medical care increased 5% for subscribers and increased 16% for dependents. Between 2009 and 2010 subscriber total plan expenditures increased 25% (Grazier et al., 2016).

Employee dependent (i.e., children aged 1 to 17 years) total spending also increased. From 2006 (pre-parity) to 2011 (parity), mean hospital charges for privately insured children receiving MH disorder and suicide/self-injury care increased 29.5% from 2006 (\$14,268) to 2011 (\$18,470) (Torio et al., 2015). For children who utilized hospitals for MH care, mean expenditures were \$5,385 per child per year; however, in contrast, for children who utilized hospitals for reasons other than MH, mean annual expenditures were \$2,212 per child per year (Torio et al., 2015).

Cumulatively, annual premiums in 2016 (post-parity) averaged \$6,435 for single coverage and \$18,142 for family coverage, with average family premiums increasing 58% from 2006 (pre-parity) (KFF, 2016). In 2016, the average family premium for covered workers in small firms (3-199 employees; \$17,546) was significantly lower than average family premiums for covered workers in larger firms (200 or more employees; \$18,395). Further, in 2016, average annual premiums for covered employees in high deductible health plans with savings option were lower for single (\$5,762) and family coverage (\$16,737) than the overall average premiums for remaining covered employees. However, average premiums for covered employees enrolled in PPO plans were higher for single (\$6,800) and family coverage (\$19,003) than the overall plan average (KFF, 2016).

Discussion

Fifteen studies and surveys assessing the effects of the MHPAEA on employer-sponsored health plans, employers, employees, and employee dependents were reviewed. Specifically, encompassing evidence relating to BH products, BH contracting, BH coverage, scope of service, quantitative financial requirements/treatment limitations, non-quantitative treatment limitations, service use, out-of-pocket spending, and total spending.

While the distribution of products offered by health plans was relatively stable from pre- to post- parity, the MHPAEA provided opportunities for consumers to increasingly enroll in CDPs for the first time (Horgan et al., 2016b). Overall, the most prevalent product types were PPO, POS, HMO, and high deductible health plan with savings option (Horgan et al., 2016b; KFF, 2016; Thalmayer et al., 2016). BH care was covered in the most commonly purchased packages, and the majority of products reported including a larger BH provider network post-parity (GAO, 2011; Horgan et al., 2016a). Further, contracting arrangements were also profoundly impacted by the MHPAEA, and the majority of health plans implemented hybrid-internal arrangements (Horgan et al., 2016b), suggesting greater integration of BH and medical/surgical benefits. Taken together, only a very small percentage of employers or health plans responded to federal parity by eliminating MH/SUD coverage (GAO, 2011; Goplerud, 2013; Horgan et al., 2016a; KFF, 2016).

Although BH care was covered in the most commonly purchased packages, variable BH diagnoses were excluded from popular products (GAO, 2011; Horgan et al., 2016a). While fewer products excluded SUD diagnoses, a small percentage of products did also exclude variable SUD diagnoses from the most popular products (GAO, 2011; Horgan et al., 2016a). Treatment exclusions were, however, more common than diagnoses exclusions. Both MH/SUD treatment exclusions increased from pre- to post- parity (GAO, 2011). There were also differences in covered disease management programs, and the

majority of products included management programs for depression in particular, while fewer included management programs for SUD (Horgan et al., 2016b). As a whole, however, the most frequent change to MH/SUD benefits included expanding benefits (GAO, 2011; Horgan et al., 2016b).

Part of benefit expansion generally included reduction of financial requirements and treatment limits. Overall, there were reductions in limits on the number of allowed office visits for MH/SUD conditions (GAO, 2011), visit/annual limits on immediate care for MH/SUD conditions (Thalmayer et al., 2016), visit/annual limits on inpatient days for MH/SUD treatment (GAO, 2011; Goplerud, 2013; Thalmayer et al., 2016), visit/annual limits on outpatient MH/SUD treatment (Goplerud, 2013; Horgan et al., 2016a; Thalmayer et al., 2016), and treatment limitations on BH emergency services (Goplerud, 2013). Further, there were reductions in lifetime dollar limits on MH/SUD treatments (GAO, 2011), inpatient financial requirements (Goplerud, 2013), outpatient financial requirements (Goplerud, 2013), and cost sharing for BH emergency services (Goplerud, 2013).

Alternatively, while some reported copayments (GAO, 2011) and coinsurance (GAO, 2011; Horgan et al., 2016a) for in-network BH care remained stable from pre- to post- parity, others found increases in inpatient in- and out- of network coinsurance (Friedman et al., 2016), intermediate care in- and out- of network coinsurance (Friedman et al., 2016), BH in-network copayments (Horgan et al., 2016a), and office-based professional service out-of-network coinsurance (Friedman et al., 2016). As a whole, however, there was no evidence that plans increased medical/surgical financial requirements in order to achieve BH parity (Goplerud, 2013).

Modifications to non-quantitative treatment limitations were somewhat mixed. In particular, one report indicated employers added to or increased their use of BH management techniques (i.e., pre-certification requirements, medical necessity criteria, retrospective reviews, service reimbursement rates) in response to the MHPAEA (Goplerud, 2013), while another reported the proportion of products requiring prior authorization for outpatient BH care decreased after implementation of federal parity (Horgan et al., 2016a). Despite changes in management techniques, the scientific contents of medical necessity criteria for MH/SUD remained stable from pre- to post- parity (Goplerud, 2013), and the prevalence of continuing review was also relatively stable (Horgan et al., 2016a), however, continuing review requirements were conducted at stricter intervals and/or with greater frequency post-parity (Horgan et al., 2016a).

Focusing on SUD in particular, post-parity service use was also somewhat mixed. Some reported increases in outpatient SUD treatment visits per user (Grazier et al., 2016; McGinty et al., 2015), and psychiatry and emergency department visits (Parthasarathy & Campbell, 2016), as well as probability of any use of inpatient (McGinty et al., 2015; Parthasarathy & Campbell, 2016) and outpatient SUD services (McGinty et al., 2015). In contrast, another found no differences in the probability of using SUD treatment attributable to federal parity, and no effects on SUD identification, SUD treatment initiation, and SUD treatment engagement (Busch et al., 2014).

Examining employee and employee dependent MH in particular, parity findings were more consistent. The mean number of MH visits per subscriber and per dependent increased (Grazier et al., 2016), as did the number of MH disorder and suicide/self-injury hospitalizations among dependents (Torio et al., 2015). Screening for MH status among dependents improved from pre- to post- parity (Torio et al., 2015). Further, with the removal of treatment limitations, the number of subscribers and dependents with 31 or more MH visits increased substantially (Grazier et al., 2016). Taken together, federal parity improved use of MH services among employees and employee dependents (Grazier et al., 2016; Torio et al., 2015).

However, when focusing both on SUD and MH, findings were mixed when evaluating BH as a whole. Some reported assessment/diagnostic evaluation visits increased during the transition to parity (Ettner et al., 2016; Harwood et al., 2016). In contrast, during this transition, one study reported family psychotherapy visits, outpatient medication management visits, and individual psychotherapy visits decreased (Ettner et al., 2016), while another study found individual psychotherapy visits increased (Harwood et al., 2016). Alternatively, these two studies reported the probability of using structured outpatient and inpatient BH care increased from pre- to post- parity (Ettner et al., 2016; Harwood et al., 2016). As a whole, however, one study found the probabilities of using any assessment/diagnostic evaluation visits, medication management visits, and family psychotherapy visits declined from pre- to post- parity (Ettner et al., 2016). Somewhat similarly, as a whole, another study found that there was no effect of federal parity on medication management visits, family psychotherapy visits, day treatment, residential treatment, or inpatient utilization from pre- to post- parity (Harwood et al., 2016).

Out-of-pocket spending findings were also variable. Some studies reported no effects of the MHPAEA on out-of-pocket spending for outpatient and inpatient SUD services (Busch et al., 2014; McGinty et al., 2015), and no effects on the proportion of spending paid for out-of-pocket among users of SUD services (Busch et al., 2014). Alternatively, another reported out-of-pocket spending on MH services increased among subscribers and dependents, with total out-of-pocket spending increasing from pre- to post- parity (Grazier et al., 2016).

Evaluating out-of-pocket spending for BH as a whole, one study reported no effects of federal parity on monthly per-member patient expenditures (Harwood et al., 2016). Another study found per-member-per-month out-of-pocket patient expenditures decreased, as did the likelihood of having any out-of-pocket expenditure (Ettner et al., 2016), while another study also found decreases in out-of-pocket expenditures per BH prescription (Mark et al., 2016). In contrast, another study reported out-of-pocket spending for inpatient and outpatient BH care increased from pre- to post- parity (Mark et al., 2016), and another survey reported that average employee premium contributions increased substantially (78-80%) from 2006 to 2016 (KFF, 2016). Despite variability in reported out-of-pocket spending, the majority of covered subscribers were enrolled in health plans with an out-of-pocket maximum for single coverage (KFF, 2016).

Further, also related, although the majority of products required only one deductible for BH and general medical/intermediate care, two separate deductibles for BH and general medical care were still required in a minority of products (Friedman et al., 2016; Goplerud, 2013; Horgan et al., 2016a; KFF, 2016). Employees in plans without an annual deductible had other forms of cost sharing (KFF, 2016). Overall, the share of covered employees in plans with a general annual deductible increased, and the average annual deductible amounts increased dramatically (300%) from 2006 to 2016 (KFF, 2016). While discriminatory deductible policies were sometimes imposed post-parity, most products adhered to MHPAEA regulations.

Focusing on total SUD spending in particular, emergency department (Parthasarathy & Campbell, 2016), psychiatry department (Parthasarathy & Campbell, 2016), outpatient utilization (McGinty et al., 2015), and inpatient utilization (McGinty et al., 2015; Parthasarathy & Campbell, 2016) costs all increased. Total spending on SUD treatment per enrollee increased, however, the MHPAEA did not impact total spending on SUD treatment per user (Busch et al., 2014). Additionally, focusing on total MH spending specifically, spending by the health plan for MH visits increased among employees and employee dependents (Grazier et al., 2016). Subscriber total MH plan expenditures (Grazier et al., 2016) and dependent mean MH hospital expenditures (Torio et al., 2015) also increased from pre- to post- parity.

In regards to total BH spending, the average annual growth in spending per enrollee for BH disorder treatments increased from pre- to post- parity (Mark et al., 2016). Specifically, spending for treatment of BH conditions in inpatient settings, outpatient settings, and spending on BH prescription drugs increased (Mark et al., 2016). Alternatively, one study reported per-member-per-month total expenditures declined (Ettner et al., 2016), while another found per-member total expenditures increased (Harwood et al., 2016). However, both these studies reported that per-member-per-month plan expenditures increased (Ettner et al., 2016; Harwood et al., 2016). Per-user-per-month plan expenditures also increased (Ettner et al., 2016), as did the cost of annual premiums (KFF, 2016). As a whole, considering spending for both SUD/MH, total BH spending increased modestly from pre- to post- parity.

Current cumulative evidence may represent conservative findings, because final MHPAEA regulations became effective on January 13, 2014 (DOL, 2016; Federal Register, 2013). Of the 15 total included studies/surveys, one survey evaluated evidence for the year 2014 and beyond (KFF, 2016), while the remaining 14 studies/surveys evaluated evidence for the years prior to 2014 (Busch et al., 2014; Ettner et al., 2016; Friedman et al., 2016; Harwood et al., 2016; Horgan et al., 2016a; Horgan et al., 2016b; GAO, 2011; Goplerud, 2013; Grazier et al., 2016; Mark et al., 2016; McGinty et al., 2015; Parthasarathy & Campbell, 2016; Thalmayer et al., 2016; Torio et al., 2015). Consequently, more is known about interim final regulations than about final regulations. It is difficult to definitively ascertain full effects and total impact because there is incomplete and insufficient evidence on final regulations in particular. This represents a significant research gap.

Because final MHPAEA regulation evidence is limited, it may negatively impact impending policy decisions proposed by the Trump Administration. To date, President Donald J. Trump has implemented an executive order to minimize the economic burden of the ACA pending a repeal of the ACA (The White House, 2017a). Following this executive order, the House advanced the American Health Care Act, approving a repeal of the ACA (The White House, 2017b). Because a potential ACA repair or repeal is pending, additional research evidence is needed to inform and guide future policy decisions, partially ensuring legislative actions are based on best evidence.

To guide policy reform, additional research should be prioritized. Lawmakers may also consider prioritizing additional exploration of diagnoses/treatment exclusions, medical necessity criteria, and compliance enforcement, given the variability identified in these particular areas. Specifically, the original MHPA of 1996 required coverage of all mental or substance-related disorders listed in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR); however, the updated MHPAEA of 2008 does not specifically define nor does it require health plans cover any or all MH/SUD diagnoses and/or benefits (Barry, Goldman & Huskamp, 2016; Carter & Landau, 2009; Glied & Frank, 2008; Mauldin, 2011; Noonan & Boraske, 2015). As a result, employers and health plans determine which diagnoses and treatments are covered.

The scope of coverage generally includes medically necessary services, however, the term "medical necessity" is not always defined (Carter & Landau, 2009; Glied & Frank, 2008; Mauldin, 2011; Noonan & Boraske, 2015). Health plans reported standard criteria was used to determine medical necessity (e.g., American Society of Addiction Medicine, McKesson Interqual), however, health plans also reported "other" criteria was used if required by employer contracts (Goplerud, 2013). Just as not all BH conditions outlined in the DSM-IV-TR are covered, nor are all treatments outlined in the International Classification of Diseases (ICD) covered (Glied & Frank, 2008). Employers and health plans may deny coverage if they believe the condition would not improve with treatment, and/or if they believe the proposed treatment is inappropriate or ineffective (Glied & Frank, 2008); they may also deny coverage related to concerns about cost (Carter & Landau, 2009).

The ability to deny coverage of particular diagnoses and treatments partially prevents moral hazard (i.e., enrollees demand more services when they personally pay less for these services; Barry et al., 2016; Garcia, 2010; Glied & Frank, 2008) and adverse selection (i.e., enrollees select health plans with premiums that do not reflect their particular individualized health risks; Barry et al., 2016; Garcia, 2010). Further, the ability to deny coverage concurrently enhances risk adjustment (i.e., transfer premium funds from healthier enrollees to enrollees with more health conditions; Beronio, Glied & Frank, 2014) and reinsurance (i.e., provide reinsurance payments that cover 80% of the costs above a high-cost threshold; Beronio et al., 2014). Protections against frivolous costs are important to both enrollees and employers/health plans. However, diagnoses/treatments exclusions and medical necessity definitions should increasingly follow more consistent evidence-based standards.

Finally, monitoring compliance with the MHPAEA should be prioritized. Adherence to evidence-based diagnoses/treatment and medical necessity standards should also be monitored. While the majority of employers and health plans complied with MHPAEA requirements, discriminatory practices remained post-parity. The Utilization Review Accreditation Commission (URAC) requires plans to document how they are in compliance with parity, whereas the National Committee for Quality Assurance (NCQA) does not have standards requiring MHPAEA compliance (Beronio et al., 2014). Similarly, the ACA has no published enforcement decisions regarding MH benefits (Noonan & Boraske, 2015). Both federal government and state governments have been designated as the principal enforcers of the MHPAEA (Barry et al., 2016; Noonan & Boraske, 2015). However, to date, private parties and advocacy groups have primarily carried out enforcement efforts, although there is no public record or public information clearinghouse describing resolution of enforcement actions (Noonan & Boraske, 2015).

Conclusion

Overall, only a very small percentage of employers or health plans responded to federal parity by eliminating BH coverage. The distribution of products offered by health plans remained stable. The majority of health plans also implemented hybrid-internal contracting arrangements, suggesting greater integration of BH and medical/surgical benefits. The most frequent change to MH/SUD services included expansion of benefits. Despite some variance, taken together, more restrictive quantitative and non-quantitative financial requirements and treatment limitations declined. Service use and out-of-pocket spending findings were also variable, although total spending generally increased modestly. As a whole, current MHPAEA evidence may represent conservative findings, because interim final regulations have primarily been evaluated while final regulations have not. Future research should evaluate the impact of final regulations on employer-sponsored health plans, employers, enrollees, and enrollee dependents. Additional research should also further explore diagnoses/treatment exclusions, medical necessity criteria, and compliance enforcement, given the variability identified in these particular areas. Further research may ultimately enhance the ability of policymakers to implement productive ACA revisions, to promote efficiency and effectiveness in regards to the prevention and treatment of mental health and substance use disorders.

Author Name and Affiliation:

Elizabeth Kreuze, Ph.D. Candidate, RN
Medical University of South Carolina, College of Nursing
99 Jonathan Lucas Street
Charleston, SC 29425
kreuze@musc.edu (email)

References

- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1): 19-32. doi: 10.1080/1364557032000119616.
- Barry, C.L., Goldman, H.H., & Huskamp, H.A. (2016). Federal parity in the evolving mental health and addiction care landscape. *Health Affairs*, 35(6): 1009-16. doi: 10.1377/hlthaff.2015.1653.
- Beronio, K., Glied, S.A., & Frank, R.G. (2014). How the affordable care act and mental health parity and addiction equity act greatly expand coverage of behavioral health care. *Behavioral Health Services & Research*, 41(4): 410-28. doi: 10.1007/s11414-014-9412-0.
- Busch, S.H., Epstein, A.J., Harhay, M.O., Fiellin, D.A., Un, H., Leader Jr., D., & Barry, C.L. (2014). The effects of federal parity on substance use disorder treatment. *American Journal of Managed Care*, 20(1): 76-82.
- Carter, M., & Landau, R. (2009). Employers face challenges with new mental health parity act. *Mental Health Coverage*, 41(1): 39-51. doi: 10.1177/0886368708329211.
- Centers for Disease Control and Prevention. (2016a). *Increase in suicide in the United States, 1999-2014*. National Center for Health Statistics Data Brief No. 241 Prepared By Sally C. Curtin, Margaret Warner, and Holly Hedegaard. Retrieved from <http://www.cdc.gov/nchs/products/databriefs/db241.htm> (Accessed Dec 3, 2016).
- Centers for Disease Control and Prevention. (2016b). *Suicide: Risk and protective factors*. National Center for Injury Prevention and Control. Retrieved from <http://www.cdc.gov/violenceprevention/suicide/riskprotectivefactors.html> (Accessed Dec 3, 2016).
- Centers for Medicare and Medicaid Services. (2016b). *Information on Essential Health Benefits (EHB) benchmark plans*. The Center for Consumer Information & Insurance Oversight. Retrieved from <https://www.cms.gov/cciiio/resources/data-resources/ehb.html> (Accessed Nov 22, 2016).
- Centers for Medicare and Medicaid Services. (2016a). *The Mental Health Parity and Addiction Equity Act (MHPAEA)*. The Center for Consumer Information & Oversight. Retrieved from https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/mhpaea_factsheet.html (Accessed Nov 22, 2016).

- Department of Labor. (2010). *Fact sheet: The Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA)*. U.S. Department of Labor Employee Benefits Security Administration. Retrieved from <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/fact-sheets/fsmhpaea.pdf> (Accessed Nov 21, 2016).
- Department of Labor. (2016). *MHPAEA enforcement fact sheet*. U.S. Employee Benefits Security Administration. Retrieved from <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/fact-sheets/fsmhpaeafenforcement.pdf>. (Accessed Nov 23, 2016).
- Ettner, S.L., Harwood, J.M., Thalmayer, A., Ong, M.K., Xu, H., Bresolin, M.J., ... Azocar, F. (2016). The mental health parity and addiction equity act evaluation study: Impact on specialty behavioral health utilization and expenditures among “carve-out” enrollees. *Journal of Health Economics*, 50: 131-43. doi: 10.1016/j.jhealeco.2016.09.009.
- Federal Register. (2013). *Final rules under the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008; Technical amendment to external review for multi-state plan program*. U.S. National Archives and Records Administration. Retrieved from <https://www.federalregister.gov/documents/2013/11/13/2013-27086/final-rules-under-the-paul-wellstone-and-pete-domenici-mental-health-parity-and-addiction-equity-act> (Accessed Nov 23, 2016).
- Friedman, S.A., Thalmayer, A.G., Azocar, F., Xu, H., Harwood, J.M., Ong, M.K., ... Ettner, S.L. (2016). The mental health parity and addiction equity act evaluation study: Impact on mental health financial requirements among commercial “carve-in” plans. *Health Services Research*. Advance online publication. doi: 10.1111/1475-6773.12614.
- GAO. (2011). *Mental health and substance use: Employers’ insurance coverage maintained or enhanced since parity act, but effect of coverage on enrollees varied*. Prepared by John E. Dicken; United States Government Accountability Office. *GAO-12-63*.
- Garcia, R.A. (2010). Equity for all? *Journal of Legal Medicine*, 31(1): 137-155. doi: 10.1080/01947641003598328.
- Glied, S.A., & Frank, R.G. (2008). Shuffling toward parity – Bringing mental health care under the umbrella. *New England Journal of Medicine*, 359(2): 113-115. doi: 10.1056/NEJMp0804447.
- Goplerud, E. (2013). *Consistency of large employer and group health plan benefits with requirements of the Paul Wellstone and Pete Domenici mental health parity and addiction equity act of 2008*. NORC at the University of Chicago; Report

- Prepared for: Office of Disability, Aging and Long-Term Care Policy; Office of the Assistant Secretary for Planning and Evaluation; U.S. Department of Health and Human Services. Retrieved from https://aspe.hhs.gov/sites/default/files/pdf/117351/mhpaeAct_0.pdf (Accessed Feb 6, 2017).
- Grazier, K.L., Eisenberg, D., Jedele, J.M., & Smiley, M.L. (2016). Effects of mental health parity on high utilizers of services: Pre-post evidence from a large, self-insured employer. *Psychiatric Services, 67*(4): 448-51. doi: 10.1176/appi.ps.201400586.
- Harwood, J.M., Azocar, F., Thalmayer, A., Xu, H., Ong, M.K., Tseng, C.H., ... Ettner, S.L. (2017). The mental health parity and addiction equity act evaluation study: Impact on specialty behavioral health care utilization and spending among carve-in enrollees. *Medical Care, 55*(2): 164-72. doi: 10.1097/MLR.0000000000000635.
- Horgan, C.M., Hodgkin, D., Stewart, M.T., Quinn, A., Merrick, E.L., Reif, S., ... Creedon, T.B. (2016a). Health plans' early response to federal parity legislation for mental health and addiction services. *Psychiatric Services, 67*(2): 162-68. doi: 10.1176/appi.ps.201400575.
- Horgan, C.M., Stewart, M.T., Reif, S., Garnick, D.W., Hodgkin, D., Merrick, E.L., & Quinn, A.E. (2016b). Behavioral health services in the changing landscape of private health plans. *Psychiatric Services, 67*(6): 622-9. doi: 10.1176/appi.ps.201500235.
- Kaiser Family Foundation. (2016). *2016 employer health benefits survey*. Report released Sept 14, 2016. Retrieved from <http://kff.org/report-section/ehbs-2016-section-one-cost-of-health-insurance/> (Accessed Feb 5, 2017).
- Mark, T.L., Hodgkin, D., Levit, K.R., & Thomas, C.P. (2016). Growth in spending on and use of services for mental and substance use disorders after the great recession among individuals with private insurance. *Psychiatric Services, 67*(5): 504-9. doi: 10.1176/appi.ps.201500034.
- Mauldin, J.A. (2011). All smoke and no fire? Analyzing the potential effects of the mental health parity and addiction equity act of 2008. *Law and Psychology Review, 35*: 193-207.
- McGinty, E.E., Busch, S.H., Stuart, E.A., Huskamp, H.A., Gibson, T.B., Goldman, H.H., & Barry, C.L. (2015). Federal parity law associated with increased probability of using out-of-network substance use disorder treatment services. *Health Affairs, 34*(8): 1331-39. doi: 10.1377/hlthaff.2014.1384.
- National Institutes of Mental Health. (2016). *Suicide prevention*. National Institutes of

- Health. Retrieved from <https://www.nimh.nih.gov/health/topics/suicide-prevention/index.shtml> (Accessed Dec 3, 2016).
- Noonan, K.G., & Boraske, S.J. (2015). Enforcing mental health parity through the affordable care act's essential health benefit mandate. *Annals of Health Law*, 24(1): 252-85.
- Parthasarathy, S., & Campbell, C.I. (2016). High-deductible health plans: Implications for substance use treatment. *Health Services Research*, 51(5): 1939-59. doi: 10.1111/1475-6773.12456.
- Substance Abuse and Mental Health Services Administration. (2015a). *Behavioral health trends in the United States: Results from the 2014 national survey on drug use and health*. U.S. Department of Health and Human Services. Retrieved from <http://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf> (Accessed Nov 23, 2016).
- Substance Abuse and Mental Health Services Administration. (2016). *Implementation of the Mental Health Parity and Addiction Equity Act (MHPAEA)*. U.S. Department of Health and Human Services. Retrieved from <http://www.samhsa.gov/health-financing/implementation-mental-health-parity-addiction-equity-act> (Accessed Nov 21, 2016).
- Substance Abuse and Mental Health Services Administration. (2015b). *Suicide prevention*. U.S. Department of Health and Human Services. Retrieved from <http://www.samhsa.gov/suicide-prevention> (Accessed Dec 3, 2016).
- Thalmayer, A.G., Friedman, S.A., Azocar, F., Harwood, J.M., & Ettner, S.L. (2016). The mental health parity and addiction equity act (MHPAEA) evaluation study: Impact on quantitative treatment limits. *Psychiatric Services*. Advance online publication. doi: 10.1176/appi.ps.201600110.
- The White House. (2017a). *Executive order minimizing the economic burden of the patient protection and affordable care act pending repeal*. Office of the Press Secretary; Jan 20, 2017. Retrieved from <https://www.whitehouse.gov/the-press-office/2017/01/20/executive-order-minimizing-economic-burden-patient-protection-and> (Accessed Feb 15, 2017).
- The White House. (2017b). *House advances American health care act*. Office of the Press Secretary; May 4, 2017. Retrieved from <https://www.whitehouse.gov/the-press-office/2017/05/04/house-advances-american-health-care-act> (Accessed May 10, 2017).
- Torio, C.M., Encinosa, W., Berdahl, T., McCormick, M.C., & Simpson, L.A. (2015). Annual report on health care for children and youth in the United States: National estimates of cost, utilization and expenditures for children with mental health

- conditions. *Academic Pediatrics*, 15(1): 19-35. doi: 10.1016/j.acap.2014.07.007.
- U.S. Department of Health and Human Services. (2017a). *Mental health and mental disorders*. Office of Disease Prevention and Health Promotion; Healthy People 2020. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/mental-health-and-mental-disorders> (Accessed Feb 2, 2017).
- U.S. Department of Health and Human Services. (2017b). *Substance abuse*. Office of Disease Prevention and Health Promotion; Healthy People 2020. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse> (Accessed Feb 2, 2017).
- World Health Organization. (2017). *Fact file: 10 facts on mental health*. Retrieved from http://www.who.int/features/factfiles/mental_health/mental_health_facts/en/ (Accessed Feb 1, 2017).