

HOW FAR WE HAVE NOT COME: AN EMPIRICAL COMPARISON OF FEDERAL AND STATE MENTAL HEALTH LEGISLATION

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This Note provides an overview of significant changes in mental health law from the nineteenth century onward and analyzes whether federal or state legal interventions create any discernible change in subjective mental health using difference-in-differences analysis. Further, this Note examines trends in the use of community-based mental health services. A quasi-experimental comparison of self-reported mental health before and after passage of the federal Mental Health Parity and Addiction Equality Act and the settlement of the Arnold v. Sarn lawsuit in Arizona shows that while state law had a marginally larger effect than federal law, neither system is particularly effective in creating change for individuals with mental illness. This Note offers an explanation for the shortcomings of current laws and provides empirically based suggestions for addressing them.

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INTRODUCTION

John Goss was an intelligent man, a member of the U.S. Air Force, and, later in life, a stockbroker, insurance salesman, welder, and warehouse clerk.¹ However, the bright future predicted by John's raw talent, flexibility, and persistence came to a screeching halt when John was 31—he had his first episode of psychosis. John cycled in and out of the Arizona State Hospital multiple times.² His last admission was purposeful: John robbed a bank in order to return to institutional care.³ Sadly, John was not “crazy” to do so; there simply was a lack of adequate mental healthcare in the community.⁴

After John's final discharge, he was often seen wandering the streets of Phoenix even though he was not homeless. He lived in a poorly equipped and run-down boarding home. In fact, that very home is the reason he wandered the streets; he did not feel safe in what was supposed to be his safe space.⁵ John “was ill, he wasn't stupid.”⁶ He knew that the law afforded services for him, yet they were not available.⁷

John was not alone in his dilemma. The National Institute of Mental Health (“NIMH”) estimates that nearly one in five adults in the United States lives with a mental illness.⁸ Further, approximately 5.6% of all U.S. adults suffer from a serious mental illness (“SMI”) that impairs daily functioning.⁹ The cost, both personal and

1. Arnold v. Ariz. Dep't of Health Servs., 775 P.2d 521, 525 (Ariz. 1989) [hereinafter “*Sarn*”].

2. *Id.*

3. *Id.*

4. *Id.* at 522 (“Arizona is last among the states of this union in providing care and treatment for its indigent chronically mentally ill.”); *see also id.* at 532 (describing the dearth of community care John received—only 10–15 minutes of medication review per month).

5. Arnold v. Sarn Lawsuit History, ARIZ. PBS at 2:18 (2012), <https://azpbs.org/horizon/2012/05/arnold-v-sarn-lawsuit-history/> [https://perma.cc/PQ2R-RTUK]. Attorney Chick Arnold noted that the S&W boarding home where John lived was notorious for having burned down multiple times. *Id.*

6. *Id.* at 2:27.

7. *Id.* at 2:30–2:46 (Attorney Chick Arnold describing John asking why the statute didn't create services for him).

8. Mental Health Information, NAT'L INST. MENTAL HEALTH, <https://www.nimh.nih.gov/health/statistics/mental-illness.shtml> [https://perma.cc/22RJ-KNS6] (last updated Jan. 2022).

9. *Id.* Serious mental illness is defined by the NIMH as “a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities.” *Id.* The NIMH also notes that “[t]he burden of mental illnesses is particularly concentrated among those who experience disability due to SMI.” *Id.*

financial, of untreated mental health problems is astounding. In 2014, 7.9 million adults in the United States had both a substance use disorder and a mental illness.¹⁰ Mental illness is associated with a drastically shorter life expectancy—up to 30 years shorter than average life expectancy¹¹—and billions of dollars in lost work productivity.¹² Despite the staggering need for treatment, many adults, like John Goss, do not receive the mental health services they need to manage their illnesses.¹³ Multiple reasons, including stigma,¹⁴ attitude,¹⁵ and structural barriers,¹⁶ are obstacles to accessing mental health treatment.

Both the federal government and multiple state governments have implemented statutes and regulations to address these issues.¹⁷ However, there is

10. *Substance Use and Mental Health*, NAT'L INST. MENTAL HEALTH, <https://www.nimh.nih.gov/health/topics/substance-use-and-mental-health/index.shtml> [https://perma.cc/4T9Q-5TD3] (last updated Mar. 2021). Research indicates that many people self-medicate to address their unmet need for mental healthcare. *See, e.g.*, Katherine M. Harris & Mark J. Edlund, *Self-Medication of Mental Health Problems: New Evidence from a National Survey*, 40 HEALTH SERVS. RSCH. 117, 117 (2005).

11. Joseph Firth et al., *The Lancet Psychiatry Commission: A Blueprint for Protecting Physical Health in People with Mental Illness*, 6 LANCET PSYCHIATRY 675, 680 (2019).

12. Ronald C. Kessler et al., *The Individual-Level and Societal-Level Effects of Mental Disorders on Earnings in the United States: Results from the National Comorbidity Survey Replication*, 165 AM. J. PSYCHIATRY 703, 703 (2008).

13. *Mental Health Information*, *supra* note 8. The NIMH reported that in 2020 only 4.2% of adults with any mental illness and 64.5% of adults with an SMI received mental health treatment in the past year. There is also an age disparity in receipt of mental health treatment with young adults receiving less treatment than older adults. *Id.* Rather than treatment centers, the criminal justice system has become the primary vehicle for care. According to the National Alliance on Mental Illness (“NAMI”), 2 million people with mental health conditions are booked into jails each year. *Jailing People with Mental Illness*, NAT'L ALL. ON MENTAL ILLNESS, <https://namibuckspa.org/about-nami-bucks-county/public-policy/jailing-people-with-mental-illness/> [https://perma.cc/85PM-RMSC] (last visited Feb. 6, 2021). “Nearly 15% of men and 30% of women booked into jails have a serious mental health condition.” *Id.* In 2019, for example, 30% (n = 12,244) of Arizona Department of Corrections inmates had moderate, high, or acute mental health needs. *Admissions, Releases, Confined Population Fact Sheet*, ARIZ. DEP'T CORR. REHABILITATION & REENTRY 3, https://corrections.az.gov/sites/default/files/REPORTS/Inmate_Population/inmate_popfacts_sheet_2019.pdf [https://perma.cc/63EQ-ED4W] (last visited Sept. 17, 2020). “Further, the majority of these individuals are misdemeanor offenders, or are serving time in jail for nonviolent offenses.” COMM. ON MENTAL HEALTH & THE JUST. SYS., INTERIM REPORT AND RECOMMENDATIONS 2 (2019), <https://www.azcourts.gov/Portals/74/MHJS/Resources/MHJSFINALInterimReport.pdf?ver=2019-09-12-154157-497> [https://perma.cc/DRY9-52MT].

14. Stephanie Knaak, Ed Mantler & Andrew Szeto, *Mental Illness-Related Stigma in Healthcare*, 30 HEALTHCARE MGMT. F. 111, 111 (2017).

15. L.H. Andrade et al., *Barriers to Mental Health Treatment: Results from the WHO World Mental Health Surveys*, 44 PSYCH. MED. 1303, 1303 (2014) While attitudinal barriers are most important for mild-to-moderate cases of mental illness for initiating and continuing treatment, structural barriers were most important for severe cases of mental illness.

16. *Id.* Primary examples of structural barriers include availability of appropriate services and health insurance.

17. *See infra* Parts I–II.

little to no evidence about whether federal or state mental health law is more effective at creating change in this area. This Note provides an overview of major shifts in mental health law at both the federal and state level (using Arizona as the primary example), empirically compares the effects of legal interventions on subjective mental health using quasi-experimental analysis at both levels, and explores the effects of federal and state law on objective mental health service utilization. Finally, this Note offers suggestions for continuing to address the needs of this vulnerable population.

I. THE EVOLUTION OF FEDERAL MENTAL HEALTH LAW

Mental health crusader Dorothea Dix played an instrumental role in nationwide mental health reform.¹⁸ After witnessing the wretched treatment of people with mental illness in jails and hospitals, she lobbied states and the federal government to create asylums—places that were meant to provide patients with humane treatment.¹⁹ However, the asylums soon turned into the torture chambers that Dix sought to eradicate.²⁰ Though the early 1900s yielded attempts at creating valid treatments,²¹ it was not until the 1950s that the first successful anti-psychotic medications were discovered.²² The ability to control symptoms led to the recognition that individuals did not need to be institutionalized. Consequently, in 1963, Congress passed the Mental Retardation Facilities and Community Mental Health Centers Construction Act²³ (“MRFA”) in response to President John F. Kennedy’s Special Message to Congress on Mental Health.²⁴

The MRFA provided federal funding for community mental health centers and research facilities; patients were finally released from the prison-like asylums in which they had been housed.²⁵ However, the results were mixed. While the MRFA changed how people thought about mental healthcare and put community

18. Aaron Levin, *Behind the Legend of Dorothea Dix Rests a Woman ‘Famous but Unknown,’* PSYCHIATRIC NEWS, Apr. 5, 2019, at 9.

19. *Id.* at 22. While Dorothea Dix was successful in persuading state legislatures to open state mental health hospitals, she failed in an attempt to engage the federal government. While her bill to sell off federal land to finance construction of asylums and care for the mentally unwell passed both the House and the Senate, it was vetoed by President Franklin Pierce. *Id.*

20. See Nellie Bly, *Inside the Madhouse*, N.Y. WORLD, Oct. 16, 1887, *passim*. Nellie Bly spent ten days undercover at an asylum, one of the first acts of investigative journalism, revealing the dehumanizing conditions that patients were subjected to. *Id.*

21. These attempts still yielded barbaric conduct as a form of treatment including lobotomy, electroshock therapy, hydrotherapy, and insulin-induced comas. *A Brilliant Madness*, PBS, <http://www.shoppbs.pbs.org/wgbh/amex/nash/timeline/index.html> [https://perma.cc/4CA3-JVM9] (last visited Oct. 15, 2020).

22. Chaitra T. Ramachandraiah, Narayana Subramaniam & Manuel Tancer, *The Story of Antipsychotics: Past and Present*, 51 INDIAN J. PSYCHIATRY 324, 324–25 (2009).

23. Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963, Pub. L. No. 88-164, 77 Stat. 282 (1963) [hereinafter MRFA].

24. See generally *Special Message to the Congress on Mental Illness and Mental Retardation*, AM. PRESIDENCY PROJECT, <https://www.presidency.ucsb.edu/documents/special-message-the-congress-mental-illness-and-mental-retardation> [https://perma.cc/AWL3-ZDDB] (last visited Sept. 20, 2020).

25. MRFA, *supra* note 23, §§ 761, 121, 131, 201.

treatment at the forefront,²⁶ only half of the proposed centers were built, and no money was provided for long-term sustention even though asylums, the only other treatment option at the time, were closed.²⁷ Essentially, patients were discharged from the hospital but did not have anywhere to go. Deinstitutionalization without appropriate community support services and the newly imposed difficulty of getting inpatient care meant that many were left homeless.²⁸

The Mental Health Systems Act was passed in 1980 as an attempt to improve mental health services.²⁹ Yet, only a year later, the federal government relinquished its role in mental health treatment to the states. The Omnibus Budget Reconciliation Act of 1981, signed by President Ronald Reagan, repealed the Mental Health Systems Act and consolidated the Alcohol, Drug Abuse, and Mental Health Administration's treatment and rehabilitation service programs into a single block grant that enabled each state to administer its allocated funds.³⁰ This changed the role of the federal government from a service provider to an assistant—both to the states and to local providers of mental health services—aiming to increase capacity.³¹ While deinstitutionalization was the claimed motivation, the true purpose was to preserve federal funds at the expense of the most vulnerable populations.³²

26. Monica Kim, *The Community Mental Health Act of 1963: A Response to Institutionalization and What Came After*, FOUNDS. L. & SOC'Y (Dec. 6, 2016), <https://foundationsoflawandsociety.wordpress.com/2016/12/09/the-community-mental-health-act-of-1963-a-response-to-institutionalization-and-what-came-after/> [https://perma.cc/V3VP-WFHD].

27. Michelle R. Smith, *50 Years Later, Kennedy's Vision for Mental Health Not Realized*, SEATTLE TIMES (Oct. 13, 2013, 8:28 PM), https://web.archive.org/web/20131023010233/http://seattletimes.com/html/nationworld/2022091710_mentalhealthxml.html [https://perma.cc/Q2LX-NQJH].

28. Peter Katel, *Housing the Homeless: Can New Government Policies End Homelessness?*, 24 CQ RESEARCHER 841, 849–50 (2014), <http://library.cqpress.com/cqresearcher/cqresrre2014101000> [https://perma.cc/X9K5-LKRZ]; Heidi Schultheis, *Lack of Housing and Mental Health Disabilities Exacerbate One Another*, CTR. FOR AM. PROGRESS (Nov. 20, 2018), <https://www.americanprogress.org/issues/poverty/news/2018/11/20/461294/lack-housing-mental-health-disabilities-exacerbate-one-another/> [https://perma.cc/9RCA-M8KH].

29. See Mental Health Systems Act, 42 U.S.C. §§ 9431–38 (1980). This Act was passed largely based on recommendations from the President's Commission on Mental Health. See generally Annette Maxey, *Review of Report to the President from the President's Commission on Mental Health. Vols. 1-4*, 53 SOC. SERV. REV. 327 (1979).

30. See Omnibus Reconciliation Act of 1981, Pub. L. No. 97-35, 95 Stat. 357, 187–96 (1981).

31. *The NIH Almanac*, NAT'L INSTS. HEALTH, <https://www.nih.gov/about-nih/what-we-do/nih-almanac/national-institute-mental-health-nimh> [https://perma.cc/Q37U-GQC9] (last updated Oct. 12, 2021).

32. See, e.g., Fred Osher, *We Need Better Funding for Mental Health Services*, N.Y. TIMES (May 9, 2016, 11:54 AM), <https://www.nytimes.com/roomfordebate/2016/05/09/getting-the-mentally-ill-out-of-jail-and-off-the-streets/we-need-better-funding-for-mental-health-services> [https://perma.cc/A7T9-WF99] (“[T]he Omnibus Budget Reconciliation Act . . . cut federal spending by 30 percent.”); Alexander Thomas, *Ronald Reagan and the Commitment of the Mentally Ill: Capital, Interest Groups, and the Eclipse of Social Policy*, 3

From that point onward, federal mental health law switched its focus to accomplishing health insurance parity between mental and physical illness.³³ The shift made sense because individuals with mental illness are disproportionately represented among the uninsured.³⁴ Achieving parity was championed by U.S. senators with a personal stake in the legislation.³⁵

The Mental Health Parity Act (“MHPA”) was signed into law in 1996.³⁶ The legislation required that dollar limits on mental health coverage be no lower than any such limits for medical and surgical benefits.³⁷ The MHPA was particularly important because insurers were not previously required to cover mental healthcare; thus, access to treatment was limited.³⁸ However, this parity mandate did not per se require mental health coverage; rather, it only required insurers that offered any sort of mental health coverage to increase that coverage to the same amount as medical limits.³⁹ Additionally, the MHPA was full of holes, including treatment limits, limitations on facilities covered, and lack of equality across co-pays.⁴⁰

ELEC. J. SOCIO. 1, 1 (1998), <https://sociology.lightningpath.org/ejs-archives/vol003.004/thomas.html> [<https://perma.cc/X5EQ-U52G>] (“Ronald Reagan pursued a policy toward the treatment of mental illness that satisfied special interest groups and the demands of the business community, but failed to address the issue: the treatment of mental illness.”); Zeb Larson, *America’s Long-Suffering Mental Health System*, ORIGINS (Apr. 2018), <https://origins.osu.edu/article/americas-long-suffering-mental-health-system> [<https://perma.cc/3JBU-Y6NB>] (“The era of deinstitutionalization reached its denouement with Reagan’s 1981 Omnibus Budget Reconciliation Act. It repealed federal funding for [community mental health centers], transformed other federal aid to the states into block grants, cut the dollar outlays by as much as 30 percent, and left the states with broad discretion over how to spend the money.”).

33. See generally Colleen L. Barry et al., *A Political History of Federal Mental Health and Addiction Insurance Parity*, 88 MILBANK Q. 404, 408–09 (2010) (explaining the early years of parity laws).

34. *Id.* at 409 (explaining the shift that occurred with the introduction of the first mental health parity legislation in Congress); Richard G. Frank, Kirsten Beronio & Sherry A. Glied, *Behavioral Health Parity and the Affordable Care Act*, 13 J. SOC. WORK DISABILITY & REHAB. 31, 32 (2014) (“People with behavioral health problems (mental and substance use disorders) are disproportionately represented among the uninsured population.”).

35. Susan Donaldson James, *Tragedy Fuels Mental Health Parity Bill*, ABC NEWS (Oct. 8, 2008, 10:35 AM), <https://abcnews.go.com/Health/story?id=5985943&page=1> [<https://perma.cc/ZB6K-2WR3>] (“[Senator] Wellstone’s brother had been hospitalized as a boy, causing near financial demise for the family. [Senator] Domenici’s daughter Clare was diagnosed 20 years ago with atypical schizophrenia, wreaking emotional havoc on his family.”).

36. Mental Health Parity Act of 1996, 29 U.S.C.A. § 1185a (West 1996).

37. *Id.*

38. See H.R. 3666, 104th Cong. § 712 (1997) (enacted).

39. *Id.*

40. Goodell points out:

The 1996 law, while a beginning step toward mental health parity, had numerous holes. The law did not address treatment limits, limitations on the types of facilities covered, differences in cost sharing, and the application of managed care techniques that continued to make coverage

The MHPA was largely superseded by the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act (“MHPAEA”), which was passed in 2008 and took effect in 2010.⁴¹ The MHPAEA extended parity to substance use disorders, and it prohibited differences in treatment limits, cost sharing, and in- and out-of-network coverage across physical, mental, and substance use insurance benefits.⁴² It also closed the financial requirement and treatment limitation holes that were left open by the MHPA.⁴³ The 2010 Patient Protection and Affordable Care Act (“ACA”) extended the reach of MHPAEA provisions to individual health insurance plans outside its previous scope and designated mental health and substance abuse care as essential health benefits.⁴⁴ As such, the ACA is the first law to require insurance coverage of mental and substance use disorder care.⁴⁵

II. MAJOR SHIFTS IN MENTAL HEALTH LAW AT THE STATE LEVEL

State mental health laws have varied greatly over time and by jurisdiction. Though state legislatures have passed numerous laws for the provision of mental health services, an examination of these laws reveals a consistent theme: states have historically only paid lip service to mental health by lacking follow-through action. States continually passed legislation that embraced deinstitutionalization and the use

for mental health benefits less generous than coverage for other health benefits. For example, a plan could set a limit of ten visits for therapy to treat major depression or charge a higher copayment for an outpatient visit for mental health treatment than for a physical ailment without violating the law.

Sarah Goodell, *Health Policy Brief: Mental Health Parity*, HEALTH AFFS. 1 (Apr. 3, 2014), <https://www.healthaffairs.org/doi/10.1377/hpb20140403.871424/full> [<https://perma.cc/39JE-BT6U>]; see also Gail A. Jensen et al., *Mental Health Insurance in the 1990s: Are Employers Offering Less to More? An Early Look at how Managed Care and Other Market Forces Have Affected Mental Health Coverage*, 17 HEALTH AFFS. 201, 201–02 (1998).

41. See Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act, 26 U.S.C.A. § 9812 (West 2008). The 110th United States Congress passed the MHPAEA as rider legislation on the Troubled Asset Relief Program (“TARP”), signed into law by President George W. Bush in October 2008. See *id.*

42. Goodell, *supra* note 40, at 2. This Act too was not without problems. For instance, similar to the MHPA before it, the MHPAEA requires parity between mental and physical health for plans offering mental health benefits but does not require an offering of mental health services. See, e.g., Justin C. Wilson, *Will Full Benefits Parity Create Real Parity? Congress’s Second Attempt at Ending Discrimination Against Mental Illness: The Paul Wellstone and Pete Domenici Mental Health and Addiction Equity Act of 2008*, 3 ST. LOUIS UNIV. J. HEALTH L. & POL’Y 343, 344 (2010); Ellen Weber, *Equality Standards for Health Insurance Coverage: Will the Mental Health Parity and Addiction Equity Act End the Discrimination?*, 43 GOLDEN GATE UNIV. L. REV. 179, 209 (2013); Taleed El-Sabawi, *MHPAEA & Marble Cake: Parity & the Forgotten Frame of Federalism*, 124 DICK. L. REV. 591, 620 (2020).

43. *The Mental Health Parity and Addiction Equity Act (MHPAEA)*, CTRS. FOR MEDICARE & MEDICAID SERVS., https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/mhpaea_factsheet [<https://perma.cc/K725-ALQ5>] (last visited Sep 3, 2020).

44. See generally Frank, Beronio & Glied, *supra* note 34.

45. *Id.* at 37.

of community-based mental health treatment; however, the funding for and creation of adequate community care rarely materialized.⁴⁶ Consequently, individuals sued state governments to hold them accountable to the promises made in the laws and to enforce the right to adequate mental health services.⁴⁷

At first, these lawsuits yielded little success. For instance, when a resident of a Pennsylvania institution for the care of individuals with developmental disabilities brought a class action against the institution alleging that the conditions violated, among other things, the rights of the class members under the Pennsylvania Mental Health and Mental Retardation Act of 1966, the Supreme Court held that the Eleventh Amendment prohibited the district court from ordering state officials to conform conduct to the state law.⁴⁸ In other words, the law existed, but the people necessary to carry it out could not be compelled to do so nor were they doing so of their own volition.⁴⁹

However, as the lawsuits continued, they eventually produced positive results. For instance, a class action of chronically mentally ill persons who were or might have been institutionalized at the Northampton State Hospital in Massachusetts sued the state to enforce the state's obligations to provide mental health services.⁵⁰ After two years of negotiation, a consent decree was signed in 1981 that required a plan for a "comprehensive community mental health and

46. See, e.g., Paul Gionfriddo, *How I Helped Create a Flawed Mental Health System That's Failed Millions—And My Son*, 31 HEALTH AFFS. 2138, 2138–39 (2012); Sarah Smith, *Doing Less With Less: Mental Health Care in Mississippi*, PROPUBLICA (Dec. 28, 2017), <https://features.propublica.org/tyler-haire-mississippi/mental-health-care-in-mississippi/> [<https://perma.cc/9JAQ-JPWQ>]; E. FULLER TORREY, OUT OF THE SHADOWS: CONFRONTING AMERICA'S MENTAL ILLNESS CRISIS 10 (1998); Catherine Ryan Gawron, *Funding Mental Healthcare in the Wake of Deinstitutionalization: How the United States and the United Kingdom Diverged in Mental Health Policy After Deinstitutionalization, and What We Can Learn From Their Differing Approaches to Funding Mental Healthcare*, 9 NOTRE DAME J. INT'L & COMP. L. 85, 96 (2019) ("Regardless of whether one views deinstitutionalization as a failure or a success for those with mental illness, it is impossible to ignore the lasting consequences and remaining issues that plague the mentally ill in the United States, such as the continued unavailability of appropriate outpatient social and medical services."); Wayne E Ramage, *The Pariah Patient: The Lack of Funding for Mental Health Care*, 45 VAND. L. REV. 951, 956 (1992) ("While the number of institutionalized patients has decreased dramatically, the funding has not followed the patients out into the community.").

47. See, e.g., *United States v. New York*, No. 13-CV-4165, 2017 WL 2616159 (E.D.N.Y. Mar. 17, 2014); Kenneth R. *ex rel. Tri-County CAP, Inc./GS v. Hassan*, 293 F.R.D. 254 (D.N.H. 2013); Complaint, *United States v. Louisiana*, 3:18-cv-608 (M.D. La. June 21, 2018), https://www.ada.gov/olmstead/documents/louisiana_complaint.html [<https://perma.cc/BKJ7-QPBE>]; *Ball v. Kasich*, 307 F. Supp. 3d 701 (S.D. Ohio 2018).

48. *Pennhurst State Sch. & Hosp. v. Halderman*, 465 U.S. 89, 92, 121 (1984).

49. *Pennhurst* was not an isolated or unusual outcome. See, for example, *Goebel v. Colorado Department of Institutions*, 764 P.2d 785 (1988), in which chronically ill persons challenged the adequacy of mental health services provided by the state and city. The Court there held that the Community Mental Health Services Purchase Act did not create substantive rights to community treatment. *Id.* at 802–03.

50. *Brewster v. Dukakis*, 520 F. Supp. 882, 884 (D. Mass. 1981).

retardation system.”⁵¹ Over the following five-year period, state mental health expenditures for community mental health services increased tenfold.⁵²

A similar lawsuit was filed in Arizona, commonly referred to as *Arnold v. Sarn*.⁵³ In 1981, a class of 4,500 people, with John Goss as a named plaintiff, filed suit alleging that the Arizona Department of Health Services (“ADHS”) and Maricopa County did not provide a comprehensive community mental health system as required by statute.⁵⁴ The Arizona Supreme Court held that the legislature created a duty for ADHS and Maricopa County to provide treatment to SMI populations, ADHS and Maricopa County breached that duty, and they provided no legitimate reason to excuse that duty.⁵⁵ Essentially, the Court held ADHS and Maricopa County responsible for creating and executing a full system of community care for individuals with SMI. While the court ruling came fairly soon after the lawsuit was filed, the actual resolution took over 30 years.⁵⁶ The final agreement was signed in 2014 and required an increase of services in four areas: Assertive Community Treatment, Supported Employment, Supportive Housing, and Peer and Family Services.⁵⁷ Additionally, the agreement required discharge for those who could benefit from community treatment but were currently being served at the Arizona

51. *Id.*

52. R. L. Okin, *Brewster v. Dukakis: Developing Community Services Through Use of a Consent Decree*, 141 AM. J. PSYCHIATRY 786, 786 (1984). *But see* Jeffrey L. Geller et al., *Second-Generation Deinstitutionalization, I: The Impact of Brewster v. Dukakis on State Hospital Case Mix*, 147 AM. J. PSYCHIATRY 982, 982 (1990) (stating that the decree was effective only with regard to the geriatric and developmentally disabled but not for the chronically ill).

53. *Arnold v. Ariz. Dep’t of Health Servs.*, 775 P.2d 521 (Ariz. 1989); *see* Shijie Feng, *Madness and Mayhem: Reforming the Mental Health Care System in Arizona*, 54 ARIZ. LAW REV. 540, 545–52 (2012) (overview of the *Sarn* timeline up to 2012).

54. *Sarn*, 775 P.2d at 527, 530.

55. *Id.* at 533–34. The Court declared that lack of funding was not a legitimate reason to excuse the state’s duty. *Id.*

56. An initial plan was created to comply with the court ruling. *See* Stipulation for Providing Community Services and Terminating the Litigation, *Sarn*, 775 P.2d 521 (No. C-432355); *see also* Ariz. Dep’t of Health Servs. & Maricopa Cnty. Dep’t of Health Servs., *The Blueprint: Implementing Services to the Seriously Mentally Ill*, S. ARIZ. EST. PLAN. COUNCIL 55–142, <https://www.saepe.org/assets/Councils/SouthernArizona-AZ/library/April%20-%20The%2033%20Year%20Old%20Saga%20of%20Arnold%20vs.%20Sarn.pdf> [<https://perma.cc/Q4PB-Y33F>] (last visited Mar. 29, 2022). After failing to come into compliance by the deadline, a new exit stipulation was agreed upon and a Court Monitor was created to monitor the state’s progress. Joint Stipulation on Exit Criteria and Disengagement at 2–4, 28, *Sarn*, 775 P.2d 521 (No. C-432355). When the Court Monitor concluded that the state was far from reaching the requirements, the state negotiated yet another amended agreement to avoid litigation and create priority of needs. Supplemental Agreement at 2–3, *Sarn*, 775 P.2d 521 (No. C-432355). The state continued to fail to realize the promises in the agreements; however, a budgetary crisis required a stay of litigation. Order Regarding Joint Stipulation to Stay Litigation During Fiscal Budget Crisis at 1–4, *Sarn*, 775 P.2d 521 (No. C-432355). In May 2012, the stay ended and plans were again made for the creation of a full system of community mental healthcare. Signed and Final Agreement at 1–10, *Sarn*, 775 P.2d 521 (No. C-432355).

57. Stipulation for Providing Community Services and Terminating the Litigation, *supra* note 56, at 5–7.

State Hospital.⁵⁸ It also limited the population of class members permitted at the State Hospital to 55 at any time.⁵⁹ Lastly, the agreement called for a comprehensive crisis system.⁶⁰

While the final *Sarn* settlement is only applicable to Maricopa County, the State of Arizona simultaneously allocated \$38.7 million to SMI services statewide,⁶¹ and ADHS encourages the evidence-based practices mandated by *Sarn* throughout Arizona.⁶² Moreover, while the *Sarn* saga continued, a separate case held that the State must uphold and follow through on statutorily created duties to the mentally ill throughout Arizona.⁶³ Additionally, 2014 brought an expansion of Medicaid,⁶⁴ a critical tool for access to a broader array of mental health services,⁶⁵ and the

58. *Id.* at 2–3.

59. *Id.* at 3.

60. *Id.* at 4–5.

61. Alison Knopf, *When Mental Health Advocate Wheels, Governor Deals (Part 2)*, PSYCHIATRY & BEHAV. HEALTH LEARNING NETWORK (June 7, 2012), <https://www.psychcongress.com/article/when-mental-health-advocate-wheels-governor-deals-part-2> [<https://perma.cc/684N-GLY8>]; *Total Behavioral Health Spending - FY 2008 to FY 2016*, ARIZ. LEGISLATURE, <https://www.azleg.gov/jlbc/bhspending.pdf> [<https://perma.cc/VP9Q-BNY5>] (last visited Mar. 12, 2021).

62. *Arnold v. Sarn*, AHCCCS, <https://www.azahcccs.gov/AHCCCS/HealthcareAdvocacy/arnoldvsarn.html> [<https://perma.cc/WLA9-2SYA>] (last visited Aug. 25, 2020) (click “Frequently Asked Questions”; then click “Why don’t these services apply state-wide?”) (“[T]he principles agreed to by the parties and incorporated into the behavioral health system in Maricopa County will be encouraged state-wide by [the Arizona Department of Health].”).

63. *In re Appeal in Gila Cnty. of Mental Health Case No. MH 92-020*, 863 P.2d 908, 910 (Ariz. Ct. App. 1993) (stating that the State Hospital is not a dumping ground for counties that choose not to provide statutorily mandated services and that counties “must provide or pay for the cost of local treatment for twenty-five days beginning with the execution of [an] order for commitment”). The lawsuit was about a different statutory duty than the one at issue in *Sarn* but underscores that the state must comply with its statutory duties to the mentally ill. *See id.*

64. Genevieve M. Kenney et al., *A Look at Early ACA Implementation: State and National Medicaid Patterns for Adults in 2014*, URB. INST. 2 (Sept. 2016), <http://www.urban.org/sites/default/files/publication/83976/2000915-A-Look-at-Early-ACA-Implementation-State-and-National-Medicaid-Patterns-for-Adults-in-2014.pdf> [<https://perma.cc/7T4F-8UBH>]. The Affordable Care Act, a federal intervention, paved the way for Medicaid expansion. *Id.* However, the expansion provision was permissive, and it was up to state legislatures to adopt and implement. *Nat’l Fed’n of Indep. Bus. v. Sebelius*, 567 U.S. 519, 585 (2012) (holding that penalizing states for not adopting the expansion exceeded Congress’s power under the Spending Clause, and thus states could not be forced into adoption). Thus, for the purposes of this Note, the expansion is considered a state-level legal intervention.

65. *State Mental Health Legislation 2014: Trends, Themes, & Effective Practices*, NAMI 9–10 (Dec. 2014), <https://www.nami.org/Support-Education/Publications-Reports/Public-Policy-Reports/2014NAMIStateLegislationReport> [<https://perma.cc/VB4P-QSGN>].

establishment of county-level mental health and veterans courts.⁶⁶ Combined, these signaled significant change for Arizona residents with mental illness.

III. METHODS

This Note uses difference-in-differences (“DiD”) methodology to evaluate whether changes in federal and state law, respectively, are consistent with improvements in subjective mental health and access to mental health services.⁶⁷ When a policy or law is enacted, one can observe the outcome under the new law and ideally would know the outcome if the new law had not been implemented as a comparator.⁶⁸ However, that counterfactual—the outcome *without* the new law—is not observable as a matter of logic because the new law did go into effect. This inescapable truth requires the analyst to search for a valid comparison group. These units would have been unaffected by the intervention but have similar characteristics to the intervention group, to facilitate a proper comparative analysis of reality versus the counterfactual.⁶⁹ The comparison group is called the control group. The difference between the intervention group and the control group is calculated before the new law (difference 1).⁷⁰ The difference between the two groups is also calculated after the new law (difference 2).⁷¹ The difference between difference 1 and difference 2 is calculated last (a literal difference in differences).⁷² This difference in differences represents the causal effect of the law.⁷³

66. Arizona passed H.B. 2457 to create this change. *See* H.B. 2458, 51st Leg., 2d Reg. Sess. (Ariz. 2014), A.R.S. § 22-601 (2014) (“Mental health treatment courts and veterans courts are post-arrest interventions designed to divert individuals from incarceration and connect them with housing, treatment and supportive services.”).

67. For general background on statical analysis, see CHRISTIAN HEUMANN ET AL., INTRODUCTION TO STATISTICS AND DATA ANALYSIS (2016). For background on the difference-in-differences method, see MYOUNG-JAE LEE, MATCHING, REGRESSION DISCONTINUITY, DIFFERENCE IN DIFFERENCES, AND BEYOND (2016).

68. DIFFERENCE-IN-DIFFERENCES, <https://diff.healthpolicydatascience.org/> (last visited Oct. 23, 2020).

69. *Id.*

70. *Id.*

71. *Id.*

72. *Id.*

73. *See id.* (providing an animation of how DiD operates). For example, if California implements a new healthcare law to lower spending and neighboring Nevada did not (but had similar spending to California before the new law), the difference in spending between California and Nevada pre-new law would be difference 1, after the law would be difference 2, and the difference between 1 and 2 is the causal effect of the new law. *Id.*

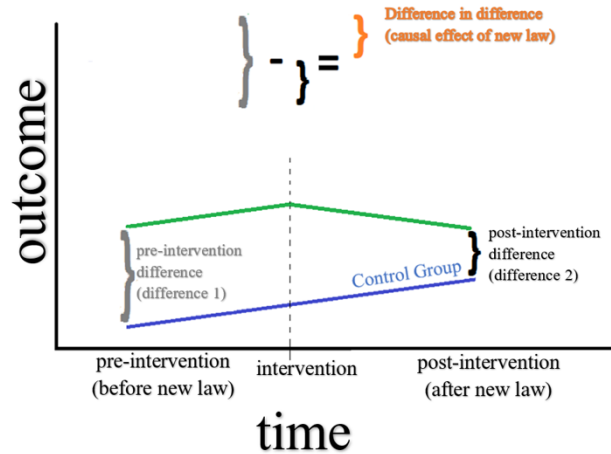


Figure 1 - Visual Representation of DiD

For a truly experimental research design, units in the control group are unaffected by the intervention (because they cannot be exposed to it), and the treated, or intervention, group is the only one exposed to the intervention.⁷⁴ In this study, such a comparison group is not possible for identifying the effect of the federal law because a congressional statute affects every state. Thus, this Note specifies a control group that already had a legal provision similar to the chosen federal intervention before the new legislation's effective date. The rationale is that a state with such a law should have been relatively unaffected by the new federal provision. On the other hand, while a purer control unit is easier to locate when exploring the effects of a state law, this approach would make the comparison between the state law change and federal law change problematic. It would require a comparison between older intervention and newer intervention in the case of federal law—a likely smaller difference—and no intervention and intervention in the case of state law—a likely larger difference.⁷⁵ In other words, any differences found may be falsely inflated due to the differing types of comparison groups. Thus, in this Note, for the state-level intervention, a state with similar provisions to the state intervention was utilized.

74. See S. Bell, *Experimental Design*, SCI. DIRECT, <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/experimental-design> [https://perma.cc/Z9WV-LYN3] (last visited Mar. 7, 2021) for multiple articles explaining this research design.

75. An example can illustrate this point. Colorado legalized marijuana use in 2012 (this is like California already having parity law in place). If the MORE Act passes, *H.R. 3884 - MORE Act of 2020*, CONGRESS.GOV, <https://www.congress.gov/bill/116th-congress/house-bill/3884> (last visited Mar. 11, 2021), marijuana will be legalized federally (this is like the MHPAEA-ACA federally mandating parity). Therefore, if the outcome measure is a number of recreational users, the effect in California before and after the federal law will likely be small. However, this measure may be very large for a state such as Wyoming where marijuana is not legal, and the new legal status may attract users that otherwise would not seek the drug because of its illegal status.

A. Selecting Intervention Periods

For the purposes of comparing effects between federal and state legal interventions, a trend break point needed to be chosen for the federal analysis and a separate trend break point for the state analysis. These could not overlap; otherwise, it would not be possible to attribute an effect to either the federal or the state law. For instance, if 1981 were chosen for both the federal intervention, the Omnibus Reconciliation Act of 1981, and for the state intervention, the Massachusetts Northampton State Hospital Consent Decree signed in 1981, it would be impossible to tell whether changes in mental health in Massachusetts after 1981 were attributed to the federal or the state law.

In combination, the ACA and MHPAEA were intended to change the entire landscape of access to mental health services. While the MHPAEA was signed in 2008,⁷⁶ it did not go into effect until 2010.⁷⁷ Though the ACA marketplace did not go live in 2010, many ACA consumer protections, improvements in quality and cost, and increases in access to care became live in 2010.⁷⁸ These effects should, in theory, have already begun to affect individuals in 2011—ergo, 2010 is the year that change occurred but would not yet have had an opportunity to create change for people's mental health. Because this undertaking was so ambitious, 2010 was chosen as the federal-level intervention point for analysis.

The *Sarn* holding is similarly monumental; *Sarn* was “the first case in which a state court has ordered the development of a comprehensive system of care for chronically mentally ill people.”⁷⁹ In 2014, *Sarn* was finally settled, \$38.7 million in funding was allocated to mental health, and alternate judicial courts were created for those with mental health difficulties.⁸⁰ Similar to the importance of 2010 for the ACA, 2014 is the year when Arizona's legal regime changed. Because that same calendar year would not have afforded enough time to effect observable change in mental health, the analysis presumes that results would not be observable until 2015.⁸¹ Thus, 2014 was chosen as the significant state-level intervention point. Lastly, the two interventions must have commonality for the comparison to make sense. The MHPAEA and *Sarn* both were major shifts that attempted to accomplish the same goal—get people with mental illness well by getting them access to care—

76. Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, §§ 511–512, 122 Stat. 3765, 3881–92 (2008).

77. The Interim Final Rule was applicable for plan years beginning on July 1, 2010. Interim Rules Under the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008, 75 Fed. Reg. 5410, 5410 (Feb. 2, 2010); 29 C.F.R. § 2590.712(i) (Westlaw 2013); 45 C.F.R. § 146.136(i) (Westlaw 2013).

78. INSTS. OF MED. OF THE NAT'L ACADEMIES ET AL., *Key Features of the Affordable Care Act by Year*, in THE IMPACTS OF THE AFFORDABLE CARE ACT ON PREPAREDNESS RESOURCES AND PROGRAMS: WORKSHOP SUMMARY app. F (2014), <https://www.ncbi.nlm.nih.gov/books/NBK241401/> [https://perma.cc/LTL5-62MB].

79. Arlene S. Kanter, *Homeless Mentally Ill People: No Longer Out of Sight and Out of Mind*, 3 N.Y. L. SCH. J. HUM. RTS. 331, 349 (1986).

80. See *supra* Part II.

81. Of course, observable changes will vary by person and by diagnosis. For this study, observable changes are reductions in mentally unwell days.

from two different vantage points (insurance and availability of community treatment).⁸²

B. Difference-in-Differences Design

The DiD design is a statistical method that allows for the comparison of before-and-after effects of an intervention between control and treated groups.⁸³ By “subtracting out” the differences of two groups at baseline, the leftover difference between groups after an intervention is attributed as the causal effect of the intervention. This design is particularly useful when randomization is not possible or when matched pairs in observable data are imperfect. This method, which underlies most econometric analyses of panel data, i.e., repeated cross-sections, uses longitudinal data about an outcome measure and compares pre- and post-intervention differences across a treated group and a control group. Here, the treatment groups are the states in which a law was passed (that was not applicable in control states) or in which state provisions were below the baseline created by a new federal statute.

To complete a DiD analysis, the researcher tracks the outcome variable before and after the intervention using a dichotomous variable for each observation. The variable takes the value zero before the intervention and the value one during and after the year of the intervention. Another dichotomous variable captures whether the state was “treated” by the new law or was not, using the definition above. An interaction term (i.e., the product of these two variables) becomes the DiD “estimator,” the one variable used to determine the quasi-experimental effect of the intervention. The outcome variable is then regressed on a constant, the interaction term and its components, and a vector of covariates. The regression coefficient on the interaction term captures the across-unit difference between the within-unit differences before and after the intervention. The treatment regression coefficient represents any pre-intervention differences between the groups while the time regression coefficient represents shared differences across the pre- and post-intervention time periods.

Any DiD analysis requires satisfying a few assumptions in order to yield reliable results.⁸⁴ First, the allocation to an intervention group cannot be determined by the outcome. For example, allocation to a smoking cessation intervention group determined by smoking status, where smoking status is the outcome, violates this assumption. Second, the composition of the intervention and control groups must be stable for repeated cross-sectional designs, such as annual CDC surveys.⁸⁵ Third, the model assumes no spillover effects.⁸⁶ These are “events that occur because of

82. See, e.g., *supra* Parts I–II.

83. See DIFFERENCE-IN-DIFFERENCES, *supra* note 68; Coady Wing, Kosali Simon & Ricardo A. Bello-Gomez, *Designing Difference in Difference Studies: Best Practices for Public Health Policy Research*, 39 ANN. REV. PUB. HEALTH 453, 455 (2018).

84. See *Difference-in-Difference Estimation*, COLUM. MAILMAN SCH. PUB. HEALTH, <https://www.publichealth.columbia.edu/research/population-health-methods/difference-difference-estimation> [<https://perma.cc/JQY4-2Q7G>] (last visited Oct. 26, 2020) (providing an overview of the assumptions necessary for DiD estimation).

85. *Id.*

86. *Id.*

something else in a seemingly unrelated context.”⁸⁷ Here, a spillover effect would be one state’s mental health law affecting mental health in another state, even though the first state’s law should not have impacted the other. Lastly, the intervention group and the control group must follow a parallel trend in the time period before the intervention.⁸⁸ This is because the DiD design assumes that the relative outcome trends would remain consistent in the absence of the intervention.

C. Data

To complete a DiD regression analysis, individual-level longitudinal data with both state and year variables needed to be chosen. The Behavioral Risk Factor Surveillance System (“BRFSS”) collects data from all 50 states on an annual basis through telephone interviews about health and health-related risk behaviors.⁸⁹ These data are collected from a representative sample of adults aged 18 years or older.⁹⁰ The BRFSS contains core questions as well as additional subscales that states may opt to administer.⁹¹ Data were gathered from 2003 to 2018.⁹² For consistency across states and years, a core question was chosen as the subjective mental health outcome variable: “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?”⁹³ The allowable responses were on a scale from 0 to 30 days.⁹⁴

Because this analysis focused on the effect of laws on the mental well-being of individuals with existing mental health difficulties, individuals that indicated zero mentally unwell days in the past 30 days were excluded from analysis. Due to the nature of mental health disorders, treatment, and remission, excluding these individuals was unlikely to have excluded people who had a mental illness and had gotten well. For instance, many disorders, such as bipolar disorder, are cyclical

87. *Spillover Effects*, U.N. ECON. & SOC. COMM’N FOR W. ASIA, <https://www.unescwa.org/spillover-effects> [<https://perma.cc/ZXP4-ND7K>] (last visited Nov. 22, 2020).

88. *Difference-in-Difference Estimation*, *supra* note 84.

89. *Behavioral Risk Factor Surveillance System*, CDC, https://www.cdc.gov/brfss/data_documentation/index.htm [<https://perma.cc/A6QC-2M28>] (Sept. 30, 2021).

90. *Id.*

91. One of these subscales, The Kessler Psychological Distress Scale, specifically inquires into different aspects of mental health and was the initial reason for choosing the BRFSS. See R.C. Kessler et al., *Short Screening Scales to Monitor Population Prevalences and Trends in Non-Specific Psychological Distress*, 32 PSYCH. MED. 959 (2002). However, states may opt in or out of conducting the subscales outside the BRFSS’s core questions. *BRFSS Frequently Asked Questions (FAQs)*, CDC, https://www.cdc.gov/brfss/about/brfss_faq.htm [<https://perma.cc/SJB5-PYKR>] (last visited Mar. 15, 2022) (Under question 7: “The states use a standardized core questionnaire, optional modules, and state-added questions.”). Arizona, a necessary state to this analysis, did not administer this subscale. Thus, it was not possible to utilize this measure.

92. *Behavioral Risk Factor Surveillance System*, *supra* note 89 (available by following the “Annual Survey Data” hyperlink that corresponds to each year from 1986 to 2020).

93. *Id.*

94. See, e.g., *LLCP 2018 Codebook Report*, CDC 18 (Nov. 21, 2019), https://www.cdc.gov/brfss/annual_data/2018/pdf/codebook18_llcp-v2-508.pdf [<https://perma.cc/6LQE-ETHF>].

and do not simply go away from one month to the next;⁹⁵ antidepressants take four to six weeks to have an effect and several months to accomplish total efficacy;⁹⁶ and remission in serious mental health often means that symptoms that disrupt daily functioning abate but residual symptoms remain.⁹⁷ Ergo, exclusion of persons with zero poor mental health days, with few exceptions, eliminated mentally healthy persons from the data set rather than eliminating those in recovery.

To account for the effects of confounding variables, several covariates were chosen for inclusion in the analysis based on existing literature that investigated mental health using the BRFSS.⁹⁸ These included age, gender, race, ethnicity, marital status, education, income, health insurance, and an indicator of physical health status.⁹⁹

Once a data set was compiled with all the variables from 2003 to 2018, all categorical variables were dummy-coded to facilitate interpretation within the regression analysis. The following reference groups were used: married for marital status, college graduate for education, employed for wages for employment, \$35–\$50,000 per year for income, white non-Hispanic for race and ethnicity, and 18–24 for age. Additionally, for all variables except gender, the responses “I don’t know,” “Refused,” and “Missing” were recoded as missing variables. For gender, “I don’t know” was included as an answer variable because it carries meaning—a response of “I don’t know” to a question about one’s gender may indicate someone questioning gender, gender fluidity, or identification with a nonbinary gender which was not included as an option response when the survey was administered. This is in contrast to “I don’t know” responses within the other variables, which only relay a lack of memory or information. Because physical health was measured on a scale of 0 to 30 physically unwell days, it did not need to be recoded.

95. See, e.g., YongJun Cheon et al., *Can Residual Symptoms During Inter-Episode Period after Partial Remission in Bipolar I Disorder Have Cyclic Patterns with Specific Frequencies?*, 15 *PSYCHIATRY INVESTIGATION* 330, 333 (2018) (discussing a case study wherein the patient demonstrated cyclical patterns including a one-month frequency as well as an eight-day frequency of residual symptoms).

96. See, e.g., Matthew Hoffman, *What Are SSRIs?*, WEBMD, <https://www.webmd.com/depression/qa/how-long-do-ssris-take-to-work> [<https://perma.cc/4WV9-SQCE>] (last visited Nov. 14, 2020); Univ. of Ill. at Chi., *Why Do Antidepressants Take So Long to Work?*, *SCIENCEDAILY* (July 28, 2016), <https://www.sciencedaily.com/releases/2016/07/160728125256.htm> [<https://perma.cc/5Q8R-V4PG>].

97. See, e.g., Ahsan Y. Khan et al., *What Are Realistic Treatment Goals? Lingering Symptoms Require You to Evaluate Pharmacotherapy and Offer Psychosocial Interventions*, 16 *CURRENT PSYCHIATRY* 35, 35 (2017) (“Of the 236 patients achieving remission at discharge, 94% had at least 1 residual symptom and 69% had at least 4 residual symptoms. Therefore, residual symptoms were highly prevalent in remitted patients.”).

98. Satvinder S. Dhingra et al., *Psychological Distress Severity of Adults Reporting Receipt of Treatment for Mental Health Problems in the BRFSS*, 62 *PSYCHIATRY SERVS.* 396, 397–98 (2011).

99. The BRFSS includes a variable which asks participants how many days in the past 30 days their physical health was unwell; higher numbers indicate poor physical health. *Behavioral Risk Factor Surveillance System*, *supra* note 89.

Individual-level data by state were unavailable for the outcome variable of mental health service utilization.¹⁰⁰ However, state totals were available through the National Survey on Drug Use and Health (“NSDUH”) located in the Substance Abuse and Mental Health Data Archive Restricted-use Data Analysis System for receipt of any mental health treatment in the past year and receipt of outpatient mental health services in the past year for years 2002–2018 (provided in two-year intervals).¹⁰¹ Further, each two-year data set, except 2004–2005, had an available serious psychological distress indicator, and thus, calculation of the state totals of receipt of mental health treatment by consumers with SMI was possible.

Because each year only has one data point, the sample size is too small to yield reliable results. In other words, any analyses completed on these data would lack statistical power. As such, no analyses were conducted on the service utilization data; instead, these data were graphed to visually examine trends. Population differences across the three comparison states are vast. Thus, rather than graphing raw counts of individuals receiving services, which would create the illusion of large discrepancies, percentages were instead calculated and graphed.¹⁰²

D. Finding Comparison States

For consistency across comparisons, Arizona was selected as the intervention state for both the analysis of federal-level change and state-level change. To meet the requirements for a control group, the comparison state must have had a law in place similar to the MHPAEA for the federal-level analysis and similar common law to the *Sarn* settlement for the state-level analysis. Additionally, each comparison state must longitudinally follow a parallel trend in the outcome variable, (bad mental health days in the last 30 days), in the years prior to the legal intervention (prior to 2010 for the federal-level analysis and prior to 2014 for the state-level analysis).

In 1973, California became the first state to address the issue of mental health insurance coverage by enacting a mandated offering bill on mental illness.¹⁰³

100. The Substance Abuse and Mental Health Services Administration does collect such data as part of the National Survey on Drug Use and Health; however, the state variable is considered an identifying variable and is not available in the public-release data sets. *National Survey on Drug Use and Health*, SUBSTANCE ABUSE & MENTAL HEALTH DATA ARCHIVE, <https://www.datafiles.samhsa.gov/study-series/national-survey-drug-use-and-health-nsduh-nid13517> [https://perma.cc/ECQ2-Q9MK] (last visited Nov. 21, 2020).

101. SUBSTANCE ABUSE & MENTAL HEALTH DATA ARCHIVE, <https://rdas.samhsa.gov/#/> [https://perma.cc/BE4S-8Z6N] (last visited Nov. 21, 2020) (variables utilized were AMHTXRC2 for any mental health treatment, AMHOUTP2 for outpatient mental health treatment, AMHTXND2 for perceived need without mental health treatment, and STNAME for state. The name of the variable for serious psychological distress was SMI for 2002–2003, SPDYAJ_B for 2006–2013, and SPDYR for 2014–2018).

102. Specifically, to calculate a percentage, the weighted count of those responding “yes” to whether they received mental health services in the past year was divided by the weighted total surveyed by state. The same was repeated for the outpatient services variable and the SMI variables for any treatment and outpatient treatment received.

103. GAIL K. ROBINSON ET AL., *STATE MANDATES FOR TREATMENT FOR MENTAL ILLNESS & SUBSTANCE USE DISORDERS* 6 (2007), <https://books.google.com/books?id=Oz>

California's Insurance Code § 10125 requires that every insurer issuing group disability insurance that covers standard medical expenses must also offer "coverage for expenses incurred as a result of mental or nervous disorders."¹⁰⁴ Further, following the Mental Health Parity Act of 1996, California passed the California Mental Health Parity Act of 1999.¹⁰⁵ This Act requires "private health insurance plans to provide equal coverage for physical health and selected mental health conditions, including serious mental illness . . . in adults and serious emotional disturbances . . . in children."¹⁰⁶ Plan limits, such as those on outpatient visits or inpatient days covered, and cost-sharing requirements, such as higher co-payments and deductibles for mental healthcare, were eliminated.¹⁰⁷ Because these provisions are sufficiently similar to the MHPAEA-ACA framework, California was chosen as a potential control state, and its subjective mental health data were then compared to Arizona's to test for parallelism prior to 2010.

NaAAAAAYAAJ&printsec=frontcover&source=gbg_summary_r&cad=0#v=onepage&q&f=false [https://perma.cc/W2GB-PE4Z].

104. CAL. INS. CODE § 10125 (Deering 1973).

105. A.B. 88, Health Care Coverage: Mental Illness, 1999 Leg., Reg. Sess. (Cal. 1999).

106. Timothy Lake et al., *A Snapshot of the Implementation of California's Mental Health Parity Law*, CAL. HEALTH CARE FOUND. 4 (Mar. 2002), <https://www.chcf.org/wp-content/uploads/2017/12/PDF-SnapshotMentalHealthParityLaw.pdf> [https://perma.cc/F9D6-APC6]. The SMI conditions covered under the law include schizophrenia, schizoaffective disorder, bipolar disorder, major depressive disorders, panic disorder, obsessive-compulsive disorder, pervasive developmental disorder or autism, anorexia nervosa, and bulimia nervosa. Cal. A.B. 88.

107. Lake et al., *supra* note 106.

Arizona California Pre-2010 Comparison

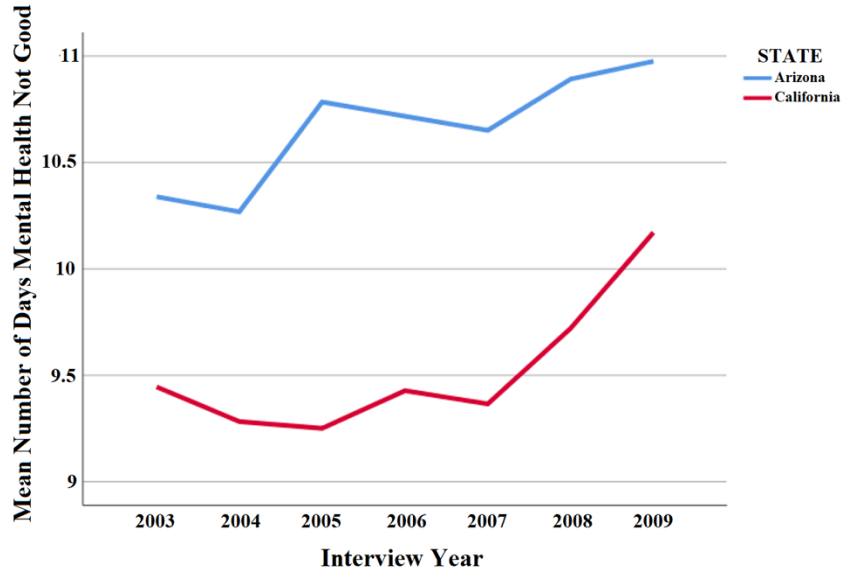


Figure 2 - Arizona California Test for Parallelism

The parallel trend assumption does not require identical slopes between the two groups.¹⁰⁸ Rather, the same general pattern should be observed.¹⁰⁹ Here, both California and Arizona have a slight downward slope in the number of days mental health was not good in the beginning of the time series (AZ: 2003–2004; CA: 2003–2005). The slope then increases (AZ: 2004–2005; CA: 2005–2006) before another drop in unwell mental health days (AZ: 2005–2007; CA: 2006–2007). The time series then continues to increase. In other words, Arizona and California follow the same general trend in unwell mental health days prior to 2010. Because the parallelism assumption was satisfied, and California’s parity law maps onto the MHPAEA, California was selected as the federal-level comparison state.

Several states had settlement agreements that were nearly identical to the *Sarn* provisions for mental health services but were dismissed due to issues of timing and satisfying the parallel trend assumption.¹¹⁰ The State of Massachusetts signed a consent decree in 1981 that, while not identical, is strikingly similar to the *Sarn* agreement. The Northampton Consent Decree called for the implementation of a comprehensive system of community mental health including nonrestrictive residential settings and nonresidential treatment, training, and support programs that

108. See *Difference-in-Difference Estimation*, *supra* note 84 (describing a visual inspection rather than a statistical test for identical slopes).

109. *Id.*

110. See Appendix 1–2.

provide major daily activity and management services.¹¹¹ These mandates mirror the *Sarn* agreement's call for increases in Supportive Housing, Supported Employment, Peer and Family Services, and Assertive Community Treatment.¹¹² *Sarn* limited the hospital census for class members to 55, and the Northampton Consent Decree limited the hospital census to 50.¹¹³ Both agreements called for the provision of crisis services.¹¹⁴ Lastly, although the slopes are not identical, Arizona and Massachusetts follow the same general trend in the pre-*Sarn* years (an overall increase over time with some time periods of decrease), making Massachusetts a suitable candidate for the state-level comparison state.

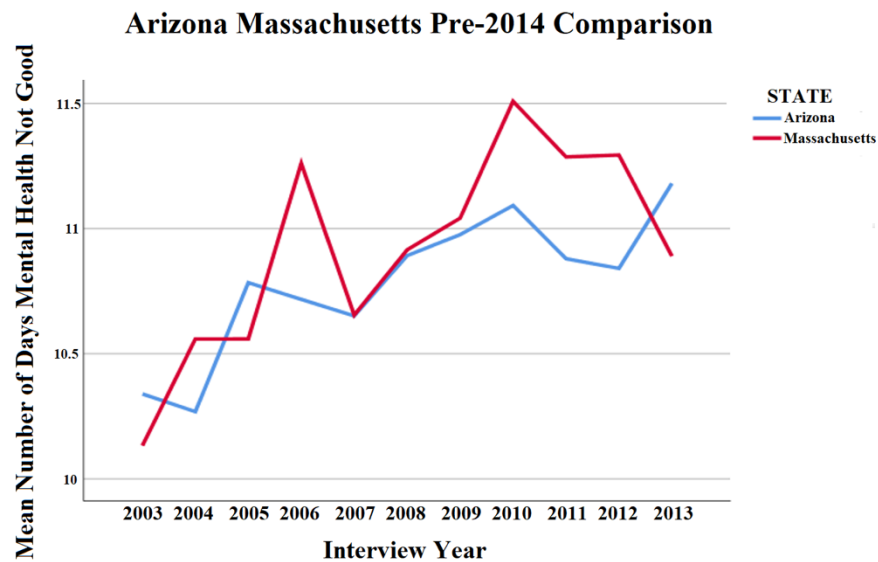


Figure 3 - Arizona Massachusetts Test for Parallelism

IV. RESULTS

A. Demographics and Assumptions

The total sample contained 505,092 participants (AZ N= 115,007; CA N= 171,474; MA N= 218,611). Of those, 59.2% were female, 70.8% reported an

111. Northampton Consent Decree at 8, *Brewster v. Dukakis*, 520 F. Supp. 882 (D. Mass. 1981) (No. 76-4423-F), <https://www.clearinghouse.net/chDocs/public/MH-MA-0001-0002.pdf> [<https://perma.cc/KPW2-HQAV>].

112. Stipulation for Providing Community Services and Terminating the Litigation, *supra* note 56, at 5–7.

113. Northampton Consent Decree, *supra* note 111, at 15; Stipulation for Providing Community Services and Terminating the Litigation, *supra* note 56, at 3.

114. Northampton Consent Decree, *supra* note 111, at 151; Stipulation for Providing Community Services and Terminating the Litigation, *supra* note 56, at 4–5.

ethnicity of white-only non-Hispanic, 16.2% reported Hispanic ethnicity, and 50.3% were married. Further, the average yearly income was between \$50,000 and \$75,000, average completed education was 1–3 years of college, and the average age was between 45 and 54.¹¹⁵ The annual averages were stable over time across groups, thus satisfying the composition stability requirement for repeated cross-sectional data. Further, the assumption that the intervention did not create spillover effects was met through the nature of the data—one state’s laws do not affect another’s, and Massachusetts did not adopt a *Sarn*-like law after 2014.

Table 1 - Demographics

	Arizona	California	Massachusetts	Total
Sex				
Female	59.60%	56.80%	60.80%	59.20%
Male	40.40%	43.20%	39.20%	40.80%
Ethnicity				
White	72.10%	58.30%	79.90%	70.80%
Hispanic	16.50%	26.30%	8.20%	16.20%
Other	11.40%	15.40%	11.90%	13.00%
Age	55-64	45-54	45-54	45-54
Income	50-75K	50-75K	50-75K	50-75K
Marital Status				
% Married	53.80%	50.50%	48.30%	50.30%

B. Initial Data Check

Prior to analysis, the data were checked using the Mann-Whitney U-test to see whether the states chosen were balanced on the regressors.¹¹⁶ This was to see whether the states did not have significant differences on key demographics so that changes could be attributed to law rather than pre-existing differences in compositions of the groups. The analysis indicated that there are significant differences between the groups on the regressors chosen. This means that the states were significantly different before the changes in law, and so these differences may be driving any mental health effects observed. However, the mean ranks indicated that, while the differences were statistically significant, they were not large. For the purposes of analysis, this means that the groups were not equally balanced and thus effects seen within the DiD analysis results may have been skewed by the differences between the groups. In other words, any effects observed in the DiD analysis cannot be solely attributed to changes in law.

115. See Appendix 3 for a table of demographics by year and state, and Appendix 4 for demographics graphs.

116. The data were not normally distributed; thus, a nonparametric test was necessary.

C. DiD Regression Results

Several regression models were tested, and the results for the federal analysis are in Table 2.¹¹⁷ In Model 1, only the DiD variables were included. The model was significant.¹¹⁸ While the year and state predictors were also significant, the DiD term was not.¹¹⁹ The addition of age improved the model fit.¹²⁰ All age predictors except ages 35 to 44 were significant; the DiD term remained nonsignificant in Model 2. Model 3 showed that the addition of gender did not improve model fit, but the female gender variable was a significant predictor.¹²¹ The DiD term remained statistically insignificant. Ethnicity was added to Model 4. Though the DiD term again was nonsignificant, the model fit increased and each ethnicity variable was significant.¹²²

Income variables were added to Model 5, increasing the model fit by .04 ($R^2 = .056$). Again, the DiD term was nonsignificant along with the income variable of \$25,000 to less than \$35,000 per year.¹²³ Income showed an inverse relationship with mentally unwell days; lower incomes predicted more mentally unwell days and higher incomes predicted decreases when compared to those earning \$35,000 to less than \$50,000 per year.¹²⁴ Marital status and education were added in Model 6. Model fit increased by .01 ($R^2 = .066$), and each marital status and education variable were significant predictors.¹²⁵ Physical health and health insurance were added in Model

117. See *infra* Table 2, p. 24.

118. A significant model means that this model provides a better explanation of the data than one without any of the explanatory variables—i.e., by chance. See Jim Frost, *How to Interpret the F-test of Overall Significance in Regression Analysis*, STATS. BY JIM, <https://statisticsbyjim.com/regression/interpret-f-test-overall-significance-regression/> [https://perma.cc/BS5Z-8RRE] (last visited Mar. 8, 2021).

119. State, $b = 1.014$, $t(96479) = 8.351$, $p < .001$; Year, $b = .555$, $t(96479) = 6.423$, $p < .001$; DiD, $b = -1.53$, $t(96479) = -1.046$, $p > .05$.

120. Model fit, R^2 , refers to a measure of goodness-of-fit. It indicates about much variance in the dependent variable is explained by the independent variable. See Frost, *supra* note 118.

121. Gender (male as reference group): Female, $b = -.153$, $t(96477) = -2.258$, $p < .05$; the unknown gender variable was nonsignificant, $b = 1.161$, $t(96477) = .231$, $p > .05$.

122. Ethnicity (Caucasian non-Hispanic as reference group): Black, $b = 2.222$, $t(96476) = 13.014$, $p < .001$; American Indian or Alaskan Native, $b = .993$, $t(96476) = 4.868$, $p < .001$; Asian, $b = -1.169$, $t(96476) = -6.655$, $p < .001$; Native Hawaiian or Pacific Islander, $b = 1.544$, $t(96476) = 3.462$, $p = .001$; Other race non-Hispanic, $b = 2.043$, $t(96476) = 5.256$, $p < .001$; Multiracial non-Hispanic, $b = 2.328$, $t(96476) = 10.559$, $p < .001$; Hispanic, $b = 1.030$, $t(96476) = 12.796$, $p < .001$.

123. Income 25k to less than 35k, $b = .111$, $t(96475) = .0904$, $p > .05$.

124. Less than 10k, $b = 3.926$, $t(96475) = 31.354$, $p < .001$; 10k to less than 15k, $b = 2.873$, $t(96475) = 21.813$, $p < .001$; 15k to less than 20k, $b = 1.926$, $t(96475) = 14.389$, $p < .001$; 20k to less than 25k, $b = 3.926$, $t(96475) = 31.354$, $p < .001$; 50k to less than 75k, $b = -1.587$, $t(96475) = -14.164$, $p < .001$; 75k or more, $b = -2.798$, $t(96475) = -28.891$, $p < .001$.

125. Marital status (currently married as reference group): Divorced, $b = 1.295$, $t(96473) = 13.402$, $p < .001$; Widowed, $b = 1.156$, $t(96473) = 9.32$, $p < .001$; Separated, $b = 1.923$, $t(96473) = 10.809$, $p < .001$; Never married, $b = .566$, $t(96473) = 5.756$, $p < .001$; Unmarried couple, $b = .309$, $t(96473) = 2.078$, $p < .05$. Education Completed (college graduate as reference group): Never attended school or kindergarten only, $b = 3.394$, $t(96473)$

7. This increased the model fit by .11 ($R^2 = .176$). The DiD term again remained nonsignificant.¹²⁶ However, both physical health and health insurance status were significant predictors.¹²⁷

Lastly, income was added in Model 8. Model 8 had the highest model fit ($R^2 = .182$). This final addition rendered the DiD term significant.¹²⁸ The employment predictors that indicated some level of unemployment were significant predictors.¹²⁹ Those that indicated some present occupation or retirement were not.¹³⁰ This final model indicates that when age, gender, ethnicity, income, marital status, education, physical health, health insurance, and employment are all accounted for, the MHPAEA-ACA was associated with (and potentially caused) a decrease in mentally unwell days within a month by .262 (.011 standard deviations). While this effect was statistically significant, physical health explained the majority of variance within mental health followed by employment status, income, marital status, and education.¹³¹

= 5.458, $p < .001$; Grades 1–8, $b = 2.333$, $t(96473) = 13.974$, $p < .001$; Grades 9–11, $b = 2.678$, $t(96473) = 18.515$, $p < .001$; High School Graduate or GED, $b = 2.049$, $t(96473) = 22.169$, $p < .001$; 1–3 Years of College or Technical School, $b = 1.568$, $t(96473) = 19.24$, $p < .001$.

126. $b = -.189$, $t(95398) = -1.411$, $p > .05$.

127. Physical health was measured by asking participants how many physically unwell days they experienced within the past month; $b = .364$, $t(96473) = 111.387$, $p < .001$. Health Insurance (no health insurance as reference group): $b = -.364$, $t(96473) = -3.866$, $p < .001$.

128. $b = -.262$, $t(95397) = -1.968$, $p < .05$.

129. Presently employed for wages was the reference group; Out of work for 1 year or more, $b = 2.514$, $t(95397) = 16.188$, $p < .001$; Out of work for less than 1 year, $b = 2.027$, $t(95397) = 13.005$, $p < .001$; Unable to work, $b = 3.016$, $t(95397) = 25.176$, $p < .001$.

130. Self-employed, $b = .027$, $t(95397) = .246$, $p < .05$; Homemaker, $b = -.167$, $t(95397) = -1.401$, $p < .05$; Student, $b = -.061$, $t(95397) = -.372$, $p < .05$; Retired, $b = .156$, $t(95397) = 1.334$, $p < .05$.

131. See *infra* Figure 4. Variance per predictor was calculated by squaring each semi partial correlation for each predictor. Percentages of variances per predictor were summed into categories (for example, the two variances for the two gender variables were added to compute one gender percentage). See generally LAWRENCE S. MEYERS, GLENN GAMST & A.J. GUARINO, *APPLIED MULTIVARIATE RESEARCH* 371 (2d ed. 2012).

Table 2 - Federal Analysis

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
B Coefficients								
State (AZ/CA)	1.014**	.904**	0.908**	0.958**	.665**	.630**	.432**	.488**
Std. Error	(.121)	(.121)	(.121)	(.121)	(.119)	(.119)	(.113)	(.112)
Year (pre-post)								
MHPAEA/ACA)	0.555**	0.551**	.543**	.491**	0.556**	.621**	.451**	0.404**
Std. Error	(.086)	(0.086)	(0.086)	(0.086)	(0.084)	(0.084)	(.079)	(.079)
Diff-in-Diff	-0.153	-0.265	-0.265	-0.242	-0.178	-0.186	-0.189	-0.262*
Std. Error	(.146)	(.146)	(.146)	(.145)	(.142)	(.142)	(.134)	(.133)
Included in model?								
Age	N	Y	Y	Y	Y	Y	Y	Y
Gender	N	N	Y	Y	Y	Y	Y	Y
Ethnicity	N	N	N	Y	Y	Y	Y	Y
Income	N	N	N	N	Y	Y	Y	Y
Marital Status	N	N	N	N	N	Y	Y	Y
Education	N	N	N	N	N	Y	Y	Y
Physical Health	N	N	N	N	N	N	Y	Y
Health Insurance	N	N	N	N	N	N	Y	Y
Employment	N	N	N	N	N	N	N	Y
N	96483	96483	96483	96483	96483	96483	95410	95410
Adjust R ²	0.002**	.010**	.010**	.016**	.056**	.066**	0.176**	.182**
* indicates p < .05								
** indicates p < .001								

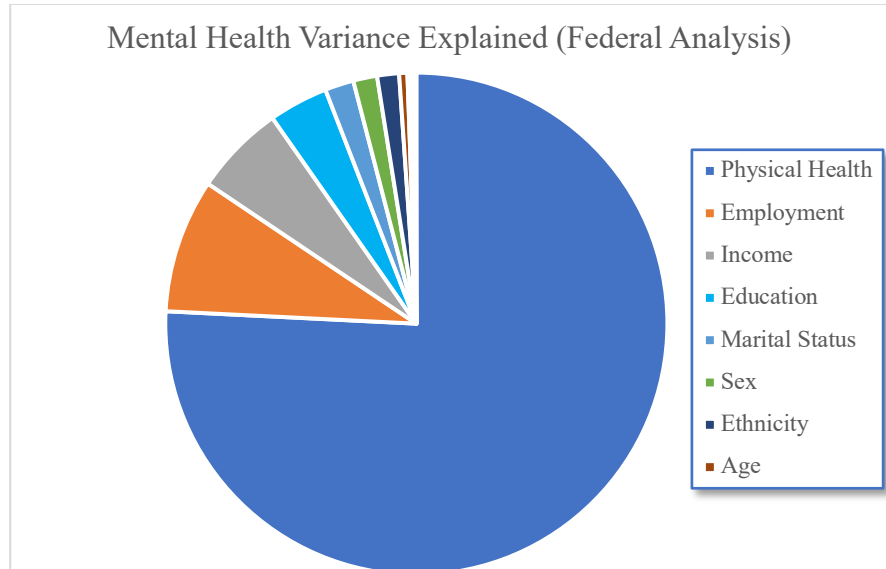


Figure 4 - Federal Analysis Variance Explained

The same stepwise testing of regression models was repeated for the state-level analysis. The results for the state-level analysis are in Table 3. Model 1 contains only the state, year, and DiD term. All three predictors were significant. Despite the model being significant, the model's goodness of fit was very weak ($R^2 = .000223$). Age was added in Model 2. This increased the model fit and each age

category, except 18–24, was a significant predictor.¹³² The model fit was unchanged by the addition of gender (Model 3). Neither gender predictor was significant; thus, gender was excluded from further models.¹³³

Model 4 showed that ethnicity predictors were significant and increased model fit.¹³⁴ The addition of income in Model 5 increased model fit by .059 ($R^2 = .073$). While the state variable and DiD variable remained significant, the year variable became insignificant in Model 5. Each income variable was a significant predictor except \$25,000 to less than \$35,000.¹³⁵ Again, an inverse relationship existed between income and mental health with less income predicting more mentally unwell days and increased income decreasing them when compared to income of \$35,000 to less than \$50,000.¹³⁶

The addition of marital status and education (Model 6) further increased model fit by .016. In addition to all the marital status and education predictors reaching significance, the year variable once again became significant in this model.¹³⁷ Model 7 added the predictors of physical health and health insurance.¹³⁸ The addition of these two variables increased model fit by .101 ($R^2 = .19$) and the year variable once again became insignificant.

Lastly, employment was added to Model 8. This model explained the most variance of the eight models ($R^2 = .198$). Only the self-employed and homemaker

132. Ages 25–34 were the reference group: Ages 18–24, $b = -.231$, $t(106154) = -1.511$, $p > .05$; Ages 35–44, $b = .339$, $t(106154) = 2.86$, $p < .05$; Ages 45–54, $b = .1558$, $t(106154) = 13.814$, $p < .001$; Ages 55–64, $b = 2.073$, $t(106154) = 18.278$, $p < .001$; Ages 65 and older, $b = 1.210$, $t(106154) = 10.617$, $p < .001$.

133. Male as reference group; Female, $b = -.004$, $t(106153) = -.054$, $p > .05$; Gender Unknown, $b = 1.720$, $t(106153) = .402$, $p > .05$.

134. Caucasian non-Hispanic as reference group: Black, $b = 1.839$, $t(106159) = 11.555$, $p < .001$; American Indian or Alaskan Native, $b = 1.660$, $t(106159) = 7.138$, $p < .001$; Asian, $b = -2.109$, $t(106159) = -7.649$, $p < .001$; Native Hawaiian or Pacific Islander, $b = 1.794$, $t(106159) = 3.159$, $p < .05$; Other race non-Hispanic, $b = 2.343$, $t(106159) = 7.701$, $p < .001$; Multiracial non-Hispanic, $b = 3.558$, $t(106159) = 13.707$, $p < .001$; Hispanic, $b = 2.339$, $t(106159) = 22.922$, $p < .001$.

135. Income reference group was 35 to less than 50 thousand; 25 to less than 35 thousand, $b = -.070$, $t(106152) = -.586$, $p > .05$.

136. Less than 10 thousand, $b = 4.743$, $t(106152) = 34.929$, $p < .001$; 10 to less than 15 thousand, $b = 3.78$, $t(106152) = 27.59$, $p < .001$; 15 to less than 20 thousand, $b = 2.429$, $t(106152) = 19.029$, $p < .001$; 20 to less than 25 thousand, $b = 1.455$, $t(106152) = 11.747$, $p < .001$; 50 to less than 75 thousand, $b = -2.476$, $t(106152) = -23.035$, $p < .001$; 75 thousand or more, $b = -3.912$, $t(106152) = -42.753$, $p < .001$.

137. Marital status (currently married as reference group): Divorced, $b = 1.224$, $t(106150) = 12.967$, $p < .001$; Widowed, $b = .875$, $t(106150) = 7.297$, $p < .001$; Separated, $b = 2.691$, $t(106150) = 15.63$, $p < .001$; Never married, $b = .535$, $t(106150) = 5.708$, $p < .001$; Unmarried couple, $b = .710$, $t(106150) = 4.484$, $p < .05$. Education Completed (college graduate as reference group): Never attended school or kindergarten only, $b = 3.991$, $t(106150) = 6.742$, $p < .001$; Grades 1–8, $b = 4.239$, $t(106150) = 22.586$, $p < .001$; Grades 9–11, $b = 3.716$, $t(106150) = 25.929$, $p < .001$; High School Graduate or GED, $b = 2.551$, $t(106150) = 29.549$, $p < .001$; 1–3 Years of College or Technical School, $b = 2.043$, $t(106150) = 25.28$, $p < .001$.

138. Physical Health, $b = .340$, $t(104176) = 113.811$, $p < .001$; Health Insurance, $b = -.6$, $t(104165) = -5.289$, $p < .001$.

predictors were nonsignificant.¹³⁹ Though the employment status variables of student and retired were significant—with the former predicting a decrease of .578 mentally unwell days and the latter predicting an increase of .474—the out-of-work variables predicted bigger increases in mentally unwell days.¹⁴⁰ This final model indicates that when age, ethnicity, income, marital status, education, physical health, health insurance, and employment are all accounted for, the *Sarn* settlement had the causal effect of decreasing mentally unwell days within a month by .341. While this effect was statistically significant, physical health explained the majority of variance within mental health followed by employment status, education, income, and marital status.¹⁴¹ The breakdown of variance explained is shown in Figure 5.

Table 3 - State Analysis

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
B Coefficients								
State (AZ/MA)	-0.186*	-.225*	-.225**	-.483**	-.772**	-0.681**	-.723**	-.598**
<i>Std. Error</i>	(.090)	(.090)	(.090)	(.091)	(.089)	(.089)	(.085)	(.085)
Year (pre-post Sarn)	-.358**	-.338**	-.338**	-.281*	0.145	0.299**	0.16	0.131
<i>Std. Error</i>	(.095)	(.095)	(.095)	(.095)	(.092)	(.092)	(.087)	-0.087
Diff-in-Diff	.692**	0.654**	0.654**	.641**	.623**	.546**	0.431**	0.341*
<i>Std. Error</i>	(.147)	(.147)	(.147)	(.146)	(.142)	(.141)	(.134)	-1.33
Included in model?								
Age	N	Y	Y	Y	Y	Y	Y	Y
Gender	N	N	Y	N	N	N	N	N
Ethnicity	N	N	N	Y	Y	Y	Y	Y
Income	N	N	N	N	Y	Y	Y	Y
Marital Status	N	N	N	N	N	Y	Y	Y
Education	N	N	N	N	N	Y	Y	Y
Physical Health	N	N	N	N	N	N	Y	Y
Health Insurance	N	N	N	N	N	N	Y	Y
Employment	N	N	N	N	N	N	N	Y
N	106159	106159	106159	106159	106159	106159	104176	104176
Adjust R ²	.00022**	.006**	.006**	.014**	.073**	.089**	.190**	.198**

* indicates $p < .05$
 ** indicates $p < .001$

139. Presently employed for wages was the reference group; Self-employed, $b = -.048$, $t(104164) = -.395$, $p > .05$; Homemaker, $b = -.071$, $t(104164) = -.542$, $p > .05$.

140. Student, $b = -.578$, $t(104164) = -.542$, $p = .001$; Retired, $b = .474$, $t(104164) = 4.07$, $p < .001$; Out of work for 1 year or more, $b = 2.53$, $t(104164) = 16.131$, $p < .001$; Out of work for less than 1 year, $b = 2.206$, $t(104164) = 13.857$, $p < .001$; Unable to work, $b = 3.237$, $t(104164) = 28.964$, $p < .001$.

141. See *supra* note 131 for an explanation of how variance per regressor was calculated.

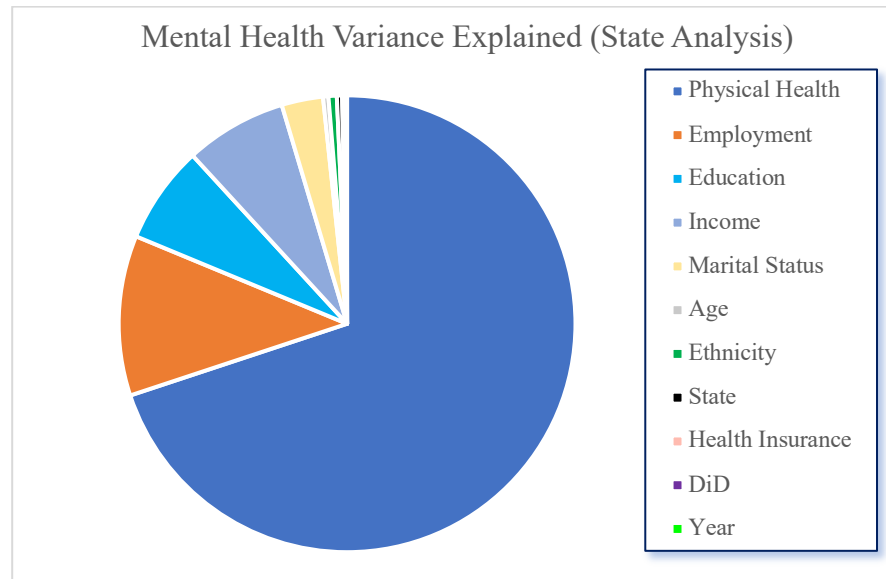


Figure 5 - State Analysis Variance Explained

D. Service Utilization Trend Lines

As previously mentioned, state individual-level data were unavailable for the outcome of service utilization and so DiD analysis was not possible; instead, group-level data were available, so the data were graphed to examine trends over time. The percentages of persons in the general population utilizing any mental health services were much lower across all years than those with serious psychological distress. On average, 14.51% of NSDUH survey respondents reported receiving any mental health treatment within the last year (across all years). In comparison, 46.04% of those with serious mental distress did so.

Moreover, mental health service utilization increased in the immediate years after the passage of the MHPAEA–ACA but began to decrease in Arizona and California between 2012 and 2013. In 2016, Arizona’s trend reversed as the state saw large improvements in service utilization. However, California’s mental health service utilization leveled off after the decrease but has yet to return to the levels observed immediately after the MHPAEA–ACA passage. These trends are graphed in Figure 6.

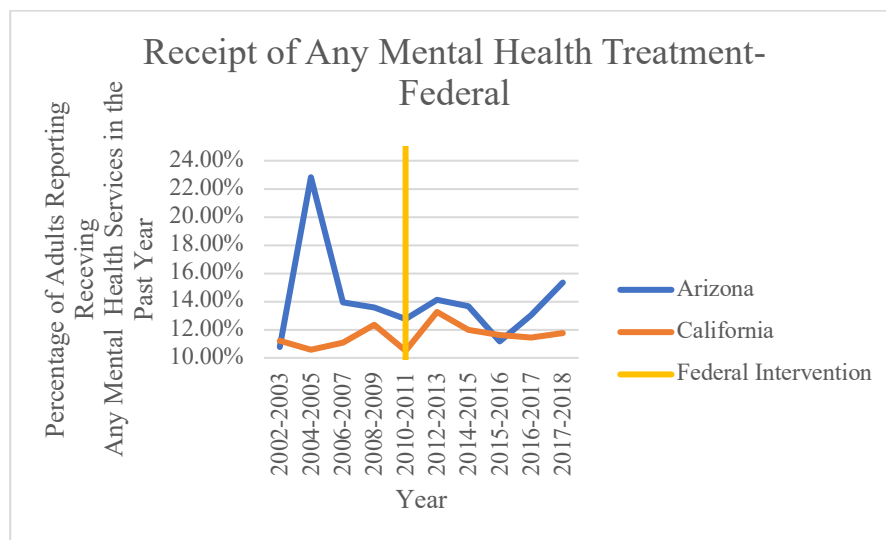


Figure 6 - Receipt of Any Mental Health Treatment

Unsurprisingly, as shown in Figure 7, the *Sarn* settlement did not have an effect on *overall* mental health service utilization because this settlement specifically targeted those with SMI. Service utilization did increase in Massachusetts; however, this is purely coincidental because the *Sarn* settlement did not affect any state other than Arizona.

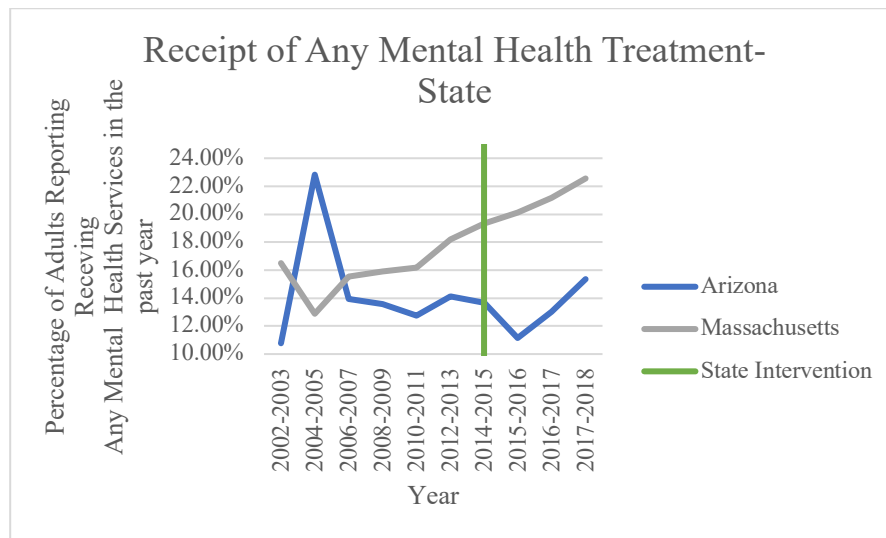


Figure 7 - Receipt of Any Mental Health Treatment - State

As Figure 8 shows, in the years immediately after the *Sarn* settlement, service utilization among those with SMI in Arizona went down; however, 2016 showed an increase in service utilization to 54.29%, an increase of 7.35% above the highest recorded service utilization in this time frame (47.62% in 2010–2011).

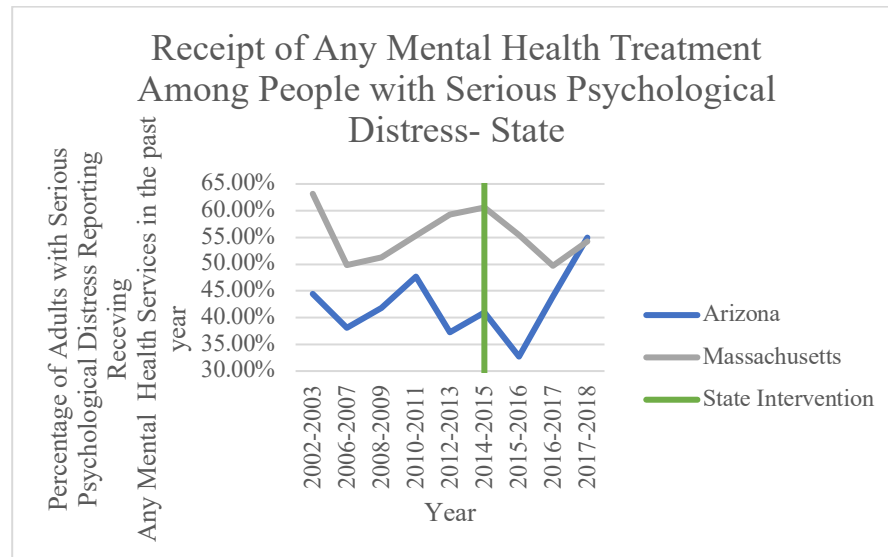


Figure 8 - Receipt of Any Mental Health Treatment Among People with Serious Psychological Distress - State

Interestingly, an examination of outpatient mental health services (Figure 9) showed that California, which experienced a downturn in general mental health service utilization, saw a slow but steady increase post-MHPAEA. Only Arizona followed the same general trend in outpatient mental health service utilization and general mental health service utilization with an early downturn but increase over time.

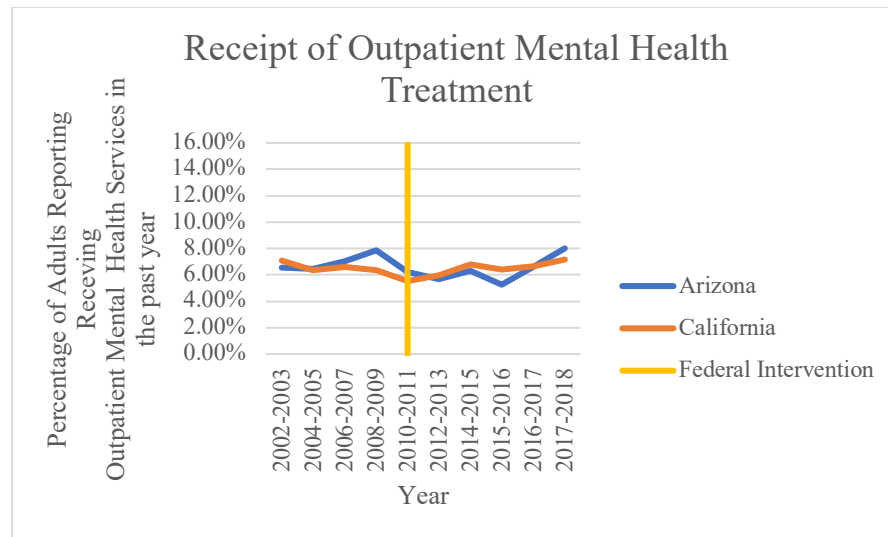


Figure 9 - Receipt of Outpatient Mental Health Treatment

Arizona also followed a similar trend in outpatient mental health services amongst those with SMI. Just as in the general population, outpatient service utilization decreased, though not as sharply, then experienced an increase over time. In contrast, Massachusetts saw a slow decrease during this same time period.

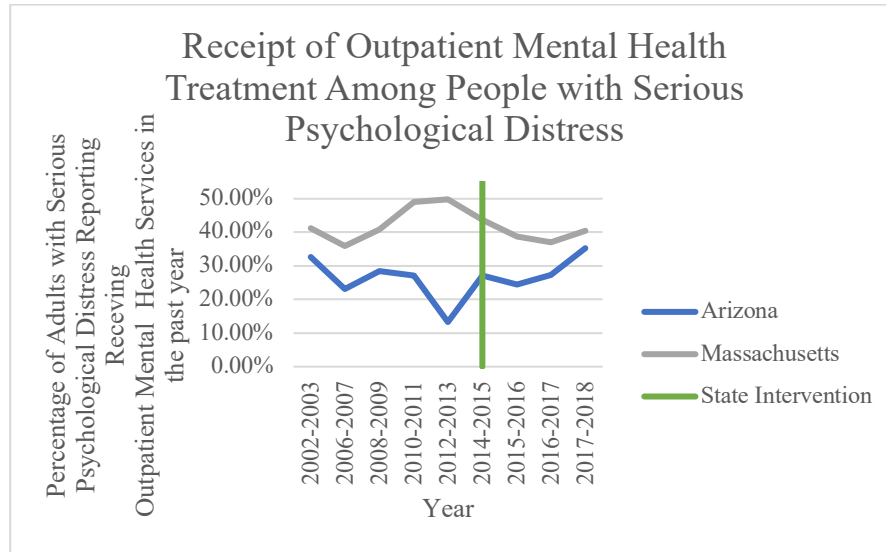


Figure 10 - Receipt of Outpatient Mental Health Treatment Among People with Serious Psychological Distress

V. DISCUSSION

A. The Meaning Behind the Numbers

In both the federal and state analyses, the DiD coefficient, the term explaining the causal effect of the law, was statistically significant when a range of covariates (age, ethnicity, income, marital status, education, physical health, health insurance, employment, and, in the case of the federal analysis, age) was accounted for. The MHPAEA-ACA had the causal effect of decreasing mentally unwell days within a month by .262—this equates to a reduction in mentally unwell days within the past month of approximately 6 hours and 17 minutes. The *Sarn* settlement had the causal effect of decreasing mentally unwell days within a month by .341—approximately 8 hours and 11 minutes. Ergo, to superficially answer the inquiry posed at the beginning of this Note—whether federal or state mental health law is more effective at creating change in mental health—state law is the winner.

However, does this “win” actually mean anything? At a glance, 8 hours, especially at the cost of \$39 million a year,¹⁴² appears to be negligible at best. But “at a glance” only considers the statistical significance of the reduction. To fully

142. 3 Decades Later: Mental Health Suit Against AZ Settled, ARIZ. PUB. MEDIA (Jan. 8, 2014), <https://news.azpm.org/p/news-splash/2014/1/8/29412-3-decade-long-mental-health-suit-against-az-settles/> [<https://perma.cc/YKG5-KUPB>].

understand what these results mean, we must look to the greater context—economic—practical significance, personal significance, and societal significance.

Economic significance can be gleaned by not only looking at the raw number of mentally unwell days decreased but also at the magnitude of that reduction. This view accounts for the baseline—how many mentally unwell days, on average, were being experienced before the law. For instance, if the average was 30 days, a reduction of several hours is essentially meaningless. However, if the average was two days, an effect of one day would be a 50% reduction. In Arizona, the mean number of mentally unwell days before the MHPAEA–ACA (2010) was 10.69. Therefore, the MHPAEA–ACA caused a reduction of approximately 2.45%. The Arizona mean of mentally unwell days prior to *Sarn* (2014) was 10.81 and *Sarn* produced a 3.15% decrease. Neither is a significant change—both laws resulted in averages of slightly over ten days of unwell mental health days. From this practical perspective, the benefit does not justify the cost.

The personal perspective ties in with the economic perspective and also adds a psychological consideration. While the economic view evaluates magnitude of reduction for the whole sample, the personal perspective considers the individuals that make up the sample. In Arizona, 2,870 people pre-MHPAEA–ACA and 4,815 people pre-*Sarn* experienced one to two mentally unwell days. For these individuals, the magnitude of reduction is huge—it almost brings them to zero mentally unwell days. What the economic view fails to consider is that this small change is meaningful even for those experiencing frequent mentally unwell days. An eight-hour reprieve can be a small dose of normalcy, a reality check that things can be okay. Eight hours of clear-headedness could mean the difference between going to work and calling out sick. Eight hours of wellness could mean the difference between suicide ideation and a suicide attempt. From this perspective, any gains are significant; it is the view that wellness is a marathon and not a sprint. Small individual hourly gains of mental wellness may culminate in large overall individual gains over time.

The societal perspective takes this position even further by positing that small individual differences lead to large *population* gains.¹⁴³ This is because slightly improving high-risk people's condition moves them out of “the danger zone” and simultaneously reduces small exposures to risk that may perpetuate illness.¹⁴⁴ Further, the societal view recognizes that, while small differences can create a change in populations, changes in the population can also create individual-level changes.¹⁴⁵ This intuitively makes sense—environment affects mental health. Ergo, the average mood or depression of a population likely affects collective functioning. Small changes caused by law can cause a shift in the collective, but the collective can also shift change.¹⁴⁶

143. GEOFFREY ROSE, KAY-TEE KHAW & MICHAEL MARMOT, ROSE'S STRATEGY OF PREVENTIVE MEDICINE 109 (2008) (“[W]hen many people each receive a little benefit, the total benefit may be large.”).

144. *Id.*

145. *Id.* at 103 (explaining that “moderate and achievable change by the population as a whole might greatly reduce the number of people with conspicuous problems”).

146. *Id.* at 106.

While the causal effect of law was the primary interest of this Note, it proved not to be the factor that explained the majority of variance within the sample—it was physical health that did so in both models.¹⁴⁷ It is then surprising that the federal law did not have a bigger effect because it gave people access to health insurance so they could address and improve physical health in addition to mental health.¹⁴⁸ The problem lies with the fact that access to healthcare is currently a theory rather than a reality for many. Individuals with mental illness are overrepresented among those living in poverty.¹⁴⁹ Health insurance premiums have been significantly and steadily rising since 2009.¹⁵⁰ Coupled together, paying the individual mandate penalty for not having health insurance was the cheaper and smarter option for those living in poverty who needed to safeguard their resources to provide for daily living needs.¹⁵¹ Medicaid is supposed to catch these people—and often, it does.¹⁵² However, the issue of coverage largely affects not those who qualify for subsidized insurance, but rather the unfortunate group caught in the middle—making too much to qualify for government insurance, but too little to afford private coverage.¹⁵³

However, not having coverage is only the starting point of why a federal law mandating insurance coverage, including mental healthcare, did not largely improve mental health. The ability to use obtained insurance coverage is the second prong to consider. Those who have health insurance face large out-of-pocket costs

147. Variance explained can be roughly understood as how much of the differences between the people are explained. While physical health explained the majority of variance within the sample, it is worth highlighting that the model itself only explains 18–19% of variance in poor mental health days. In other words, this model does not account for the full picture of mental health (as is common in social science research).

148. Of course, access to care does not necessarily equal physical health. Physical health requires one's own volition to eat well, exercise, etc. However, it is worth noting that preventative physical health care involves providing patients with education about how to care for oneself.

149. Renuka Nardodkar et al., *Legal Protection of the Right to Work and Employment for Persons with Mental Health Problems: A Review of Legislation Across the World*, 28 INT'L REV. PSYCHIATRY 375, 382 (2016).

150. E.g., Renée Sazci, *Health Insurance Premiums Are Rising. Are You Prepared?*, LIVELY: LIVELY BLOG (Apr. 23, 2020), <https://livelyme.com/blog/employer/how-fast-health-insurance-premiums-increasing> [<https://perma.cc/6B8W-M2B7>].

151. Eddie Adkins & Lynn Ettinger, *Whether to Buy Health Coverage or Pay the Penalty*, AM. INST. CERTIFIED PUB. ACCTS., https://www.aicpa.org/research/hcr/downloadabledocuments/aca_individual_decision_making.pdf [<https://perma.cc/SWL9-7V57>] (last visited Jan. 23, 2021).

152. See, e.g., *Policy Basics: Introduction to Medicaid*, CTR. ON BUDGET & POL'Y PRIORITIES (Apr. 14, 2020), <https://www.cbpp.org/research/health/introduction-to-medicaid> [<https://perma.cc/Z9NC-6JSC>] (explaining that Medicaid provides insurance to low-income individuals and that enrollment expands to meet rising needs during troubling times such as the Great Recession).

153. Rick Schmitt, *Caught in The Middle: Making Too Much—And Too Little—to Benefit from Health Care Changes*, KHN (Jan. 5, 2010), <https://khn.org/news/affordability-2> [<https://perma.cc/KXC2-9EZ7>].

that have been rising for decades.¹⁵⁴ For instance, a typical person with diabetes spends \$4,800 a year, even with insurance, to manage his or her illness.¹⁵⁵ This is roughly 10% of the average American's income.¹⁵⁶ Those with mental illness pay, on average, \$341 more than that.¹⁵⁷ Even worse, those with drug use disorders pay \$1,242 more than people with diabetes.¹⁵⁸ Ergo, it is not enough to just have health insurance—it needs to be *usable* health insurance—possibly explaining why the federal law did not have a larger effect. This is reflected in the trend lines which do not show large and consistent gains in use of services after the MHPAEA–ACA.

The larger question though, to make sense of the results, is why physical health explains the most variance while unemployment and low levels of education predict the largest changes (both adding over two days) in how many mentally unwell days a person experiences. The answer may be a simple one—physical health and mental health are inextricably bound, and social status and resources contribute to both.¹⁵⁹ The biological, psychological, and social factors that shape us as human beings do not operate individually but rather dependently—our mental state affects our physical health, and our general health is affected by the circumstances under which we live. This is not just speculation. Research consistently confirms that there is a relationship between mental and physical health that is affected through social circumstances.¹⁶⁰ It is the biopsychosocial model at work.

154. Rabah Kamal et al., *How Has U.S. Spending on Healthcare Changed over Time?*, PETERSON-KFF HEALTH SYS. TRACKER (Dec. 23, 2020), <https://www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changed-time/> [https://perma.cc/D67N-8W5N].

155. Amanda Nguyen & Katie Mui, *The Staggering Cost of Controlled and Uncontrolled Diabetes*, GOODRX (Apr. 7, 2020), <https://www.goodrx.com/diabetes/annual-cost-of-managing-diabetes-and-treating-uncontrolled-diabetes> [https://perma.cc/ECF6-WZ7R].

156. *Id.*

157. Linda Carroll, *Americans Spending More Out-Of-Pocket on Mental Health than Physical Health*, REUTERS (Nov. 8, 2019), <https://www.reuters.com/article/us-health-mental-illness-costs-idUSKBN1XI2EA> [https://perma.cc/FK6M-HLA2].

158. Wendy Yi Xu et al., *Cost-Sharing Disparities for Out-of-Network Care for Adults with Behavioral Health Conditions*, 2 JAMA NETWORK OPEN 1, 7 (2019).

159. This is easy to see in an example: suppose there is a man who is obese and has severe clinical depression. He does not exercise because he is too depressed. His obesity worsens because he does not exercise. He first became depressed when he lost his job and could not find another one because most jobs required a college degree, which he did not have. The more time he did not work, the more depressed he became. The more depressed he became, the less he exercised. The less he exercised, the more unhappy he became with himself, and so on. This overly simplistic example demonstrates the cyclical nature of health as human beings.

160. See, e.g., Iris van der Heide et al., *The Relationship Between Health, Education, and Health Literacy: Results from the Dutch Adult Literacy and Life Skills Survey*, 18 J. HEALTH COMM'C 172, 172 (2013) (finding that health literacy plays a role in explaining the relationship between low levels of education and poor physical health); Andrew H. Kemp & Daniel S. Quintana, *The Relationship Between Mental and Physical Health: Insights From the Study of Heart Rate Variability*, 89 INT'L J. PSYCHOPHYSIOLOGY 288, 288 (2013) (finding that mental disorders have an effect on heart rate variability, which in turn has effects on

When the interdependent nature of health is taken into account, it makes sense that *Sarn* caused a larger effect, if marginally, than the federal intervention—it was on the right track. Unlike the federal law which targeted one small part of a larger problem, the *Sarn* settlement attempted to address the multifaceted nature of people and the effect mental illness has on their daily lives. The settlement called for assertive community treatment, which provides a team approach of various specialists to provide wrap-around services from medication management to housing to employment for those who have significant difficulty in independent functioning.¹⁶¹ For those who need support, but not to the intensive level of assertive community treatment, *Sarn* provided for employment, housing, family, and crisis services.¹⁶² So why did *Sarn* not have a greater effect?

While the causal reason is difficult to ascertain, one hypothesis seems particularly plausible—*Sarn* only captures a portion of a true wellness model. In order to have access to the services that *Sarn* introduced to Arizonans, a person must have an SMI designation.¹⁶³ This means having a qualifying mental disorder which resulted in “emotional or behavioral functioning that is so impaired as to interfere substantially with their capacity to remain in the community.”¹⁶⁴ In other words, a person has to be severely unwell, basically to the point of depleted functioning, before they are able to get services. This type of service is necessary. However, for it to be the primary vehicle for comprehensive mental healthcare flies in the face of science—early prevention and intervention are often the key to long-term positive

functional and social well-being, and over time leads to immune dysfunction and inflammation); Julius Ohrnberger, Eleonora Fichera & Matt Sutton, *The Relationship Between Physical and Mental Health: A Mediation Analysis*, 195 SOC. SCI. MED. 42, 42 (2017) (finding lifestyle choice and social capital to mediate the relationship between physical and mental health); Lisa Rosenthal et al., *The Importance of Full-Time Work for Urban Adults’ Mental and Physical Health*, 75 SOC. SCI. MED. 1692, 1692 (2012) (finding that underemployment and unemployment produced adverse mental and physical health consequences through mediating factors such as maladaptive coping skills); Rena L. Repetti, Karen A. Matthews & Ingrid Waldron, *Employment and Women’s Health: Effects of Paid Employment on Women’s Mental and Physical Health*, 44 AM. PSYCH. 1394, 1394 (1989) (finding that employment yields beneficial health effects for women that may be mediated by social support).

161. *Assertive Community Treatment (ACT)*, MERCY CARE, <https://www.mercycareaz.org/assets/pdf/community-resources/ACT-Brochure-Eng-REBRANDED.pdf> [<https://perma.cc/FA79-BFW8>] (last visited Jan. 27, 2021).

162. Stipulation for Providing Community Services and Terminating the Litigation, *supra* note 56, at 5–7.

163. *Arnold v. Ariz. Dep’t of Health Servs.*, 775 P.2d 521, 538 (Ariz. 1989) (holding that the duty to provide services is only to the chronically mentally ill). The term chronically mentally ill, “CMI,” has been replaced by SMI. *See also* ARIZ. REV. STAT. ANN. § 36-550(4) (2020); Stipulation for Providing Community Services and Terminating the Litigation, *supra* note 56, at 2 (explicitly stating that these are the best practices for persons with SMI and that the obligations are only to class members). For general background information on SMI determinations, see *Serious Mental Illness Eligibility Determination*, in AHCCCS MED. POL’Y MANUAL (2021), <https://www.azahcccs.gov/shared/Downloads/MedicalPolicyManual/300/320P.pdf> [<https://perma.cc/K42Z-GQ4E>].

164. ARIZ. REV. STAT. ANN. § 36-550(4).

outcomes.¹⁶⁵ Further, *Sarn* completely misses people who are unwell but are able to maintain minimal daily functioning.¹⁶⁶ Thus, although state law can create more change than federal law, it is still missing the bigger picture. So where do we go from here?

B. Next Steps

While it may be tempting to say that this broken system is beyond repair, it is infeasible to start from scratch. Fortunately, we do not have to. The problem is not that our laws are defective per se—the problem is enforcement and scope. We do not enforce our own laws, and our laws do not fully address mental health.

Enforcement troubles are easy to see in the case of *Sarn*—it took 30 years to enforce the agreement—but exist in less apparent ways in the case of the MHPAEA. Insurers facially comply with the law but create inequities behind health plans that lead to disparate treatment. Specifically, reimbursement rates for behavioral health visits are lower than for medical office visits, and thus fewer mental health providers participate in insurance plans (and those who do are of lower quality).¹⁶⁷ Ultimately, this leads mental health patients to seek expensive out-of-network care at much higher rates than physical health patients facing much higher out-of-pocket expenses.¹⁶⁸ Disparities in out-of-pocket expenses are further exacerbated by wrongful denial of coverage due to arbitrary and internally developed standards for “medical necessity.”¹⁶⁹ As Angela Kimball, national

165. See, e.g., Eóin Killackey & Alison R. Yung, *Effectiveness of Early Intervention in Psychosis*, 20 CURRENT OP. PSYCHIATRY 121, 121 (2007) (“[T]here is a consistent relationship between duration of untreated psychosis and outcome independent of other factors.”); Patrick D. McGorry, Aswin Ratheesh & Brian O’Donoghue, *Early Intervention—An Implementation Challenge for 21st Century Mental Health Care*, 75 JAMA PSYCHIATRY 545, 546 (2018) (“[T]he realistic and hard-won optimism generated by the impressive evidence base for [early intervention] in psychosis is an essential building block for a more positive future for psychiatry.”).

166. See *Serious Mental Illness Eligibility Determination*, *supra* note 163, at 4–5 (describing the necessity of a functional dysfunction to meet the criteria for SMI status).

167. STEVE MELEK, STODDARD DAVENPORT & T.J. GRAY, ADDICTION AND MENTAL HEALTH VS. PHYSICAL HEALTH: WIDENING DISPARITIES IN NETWORK USE AND PROVIDER REIMBURSEMENT 6–7 (2019), <https://www.milliman.com/-/media/milliman/importedfiles/ektron/addictionandmentalhealthvsphysicalhealthwideningdisparitiesinnetworkuseandproviderreimbursement.ashx> [https://perma.cc/5DR8-WG7U].

168. NATIONAL ALLIANCE ON MENTAL ILLNESS, OUT-OF-NETWORK, OUT-OF-POCKET, OUT-OF-OPTIONS: THE UNFULFILLED PROMISE OF PARITY 2–3 (2016), https://www.nami.org/Support-Education/Publications-Reports/Public-Policy-Reports/Out-of-Network-Out-of-Pocket-Out-of-Options-The/Mental_Health_Parity2016.pdf [https://perma.cc/99TT-M97U].

169. E.g., *Wit v. United Behav. Health*, No. 14-CV-02346-JCS, 2019 WL 1033730, at *48 (N.D. Cal. Mar. 5, 2019), *amended*, No. 14-CV-02346-JCS, 2020 WL 6469764 (N.D. Cal. Nov. 3, 2020) (noting that the standards of insurance coverage in this class action were determined by financial motives rather than any sort of accepted standards of care); Paul S. Appelbaum & Joseph Parks, *Holding Insurers Accountable for Parity in Coverage of Mental Health Treatment*, 71(2) PSYCHIATRIC SERVS. 202 (2020) (explaining the *Wit* case and providing next steps to achieve parity); see also SARA ROSENBAUM ET AL., MEDICAL

director of the National Alliance on Mental Illness, said, “There is a lack of oversight and efforts to make sure that health plans are compliant with not only the letter of the law, but the spirit of the law.”¹⁷⁰ California has recognized the loopholes within the MHPAEA and has passed a law to address the issue of nonconformity in standards of care leading to denial of coverage and, consequently, out-of-pocket expenses. The new law requires an adoption of uniform standards of care that cannot be manipulated for cost savings.¹⁷¹ California’s law should serve as a template for one of many amendments required for the MHPAEA to accomplish real parity—only when the loopholes are closed nationwide does the law have a chance of producing a real effect.¹⁷²

The issue of scope is twofold: there are the issues of mental health treatment scope and geographical scope. As previously discussed, mental health is multifaceted and should be addressed as such. Addressing mental health directly through treatments only aimed at symptom suppression, and only once symptoms are incredibly severe, does little to effectuate meaningful and lasting change. The field of psychology has acknowledged the lifespan theory. Psychopathology is not a specific event; it is the culmination of biological, psychological, and social forces over time.¹⁷³ Luxembourg has recognized this fact and implemented Positive Education into their school curriculum.¹⁷⁴ Positive Education is a strength-oriented

NECESSITY IN PRIVATE HEALTH PLANS: IMPLICATIONS FOR BEHAVIORAL HEALTH CARE 19–24 (2003), https://hsrc.himmelfarb.gwu.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1170&context=sphhs_policy_facpubs [https://perma.cc/B68J-Q39E] (reviewing 54 cases based on challenging medical necessity determinations including cases finding that insurers acted in an arbitrary or capricious manner in unfairly denying claims); Neiloy Sircar, *Your Claim Has Been Denied: Mental Health and Medical Necessity*, AM. U. WASH. COLL. L. 10–11 (2017) (explaining that medical necessity definitions are ambiguous and written by entities with financial incentive to “cherry-pick” what will and will not be covered).

170. Ali Shana, *Mental Health Parity in the US: Have We Made Any Real Progress?*, 37 PSYCHIATRIC TIMES 1, 30 (2020).

171. Darrell Steinberg & Patrick J. Kennedy, *New California Law Should Serve as a National Model for Mental Health Care Reform*, STAT (Oct. 14, 2020), <https://www.statnews.com/2020/10/14/new-california-law-should-serve-as-a-national-model-for-mental-health-care-reform/> [https://perma.cc/L4QE-YKQZ].

172. See Benjamin D Heller, *Revolutionizing the Mental Health Parity and Addiction Equity Act of 2008*, 47 SETON HALL REV. 569, 587–601 (2017) (discussing MHPAEA’s flaws and proposed amendments to address the insufficiencies).

173. See generally Timothy P. Melchert, BIOPSYCHOSOCIAL PRACTICE: A SCIENCE-BASED FRAMEWORK FOR BEHAVIORAL HEALTH CARE (2015) (providing a comprehensive review of the scientific foundations of the biopsychosocial model); see also Richard J. Porter, *The Biopsychosocial Model in Mental Health*, 54 AUSTL. & N.Z. J. PSYCHIATRY 773, 773–74 (2020) (discussing several published studies that exemplify the biopsychosocial effects on mental illness).

174. *The Luxembourg Education System*, LE GOUVERNEMENT DU GRANDE-DUCHE DE LUX. 13 (2020), <https://men.public.lu/dam-assets/catalogue-publications/divers/informations-generales/the-luxembourg-education-system-en.pdf> [https://perma.cc/V2BH-4Y4L] (describing the global approach to the child which includes developing abilities and providing support measures); Joanna Gilbride-West, *World Mental Health Day: Positive*

approach that teaches children to harness their unique characteristics while teaching them wellness skills to lead to better adjustment throughout life.¹⁷⁵ This approach has been shown to be effective in increasing subjective well-being¹⁷⁶ and preventing the onset of depression.¹⁷⁷ Though the United States does not have a national curriculum—a policy itself criticized¹⁷⁸—state standards must “be developed and improved in order for states to receive federal assistance.”¹⁷⁹ Ergo, the federal government should incentivize states to add wellness-skills building to school curriculums as a method of early prevention and stigma reduction.

While prevention addresses one part of the scope issue, swift and consistent intervention that addresses the multiplicity of needs affecting mental health requires the implementation of integrated care. Integrated care has been recognized as the best practice—a one-stop shop for treating people holistically.¹⁸⁰ The United States has many examples around the world from which it can borrow.¹⁸¹ For instance, the law in Germany is bifurcated between state and federal law. Specifically, there is no national mental health law, and the 16 German states are responsible for mental health legislation,¹⁸² making it a great candidate from which to draw inspiration.¹⁸³ Since 2013, Germany has embedded concerns about mental stress in occupational

Education in Luxembourg, CITY SAVVY LUX. (Oct. 10, 2018), <https://www.citysavvy.luxembourg.com/featured/world-mental-health-day-positive-education-in-luxembourg/> [<https://perma.cc/PZ8M-C6H3>] (discussing two schools that offer curriculums based in positive education); Carmel Cefai et al., *Strengthening Social and Emotional Education as a Core Curricular Area Across the Eu: A Review of the International Evidence*, SALZBURG GLOB. SEMINAR 74 (2018), https://www.salzburgglobal.org/fileadmin/user_upload/Documents/2010-2019/2018/Session_603/Strengthening-Social-and-Emotional-Education.pdf [<https://perma.cc/7Q8P-KTG6>] (describing peer mediation employed in 17 schools in Luxembourg, which helps students develop conflict management, interpersonal, and leadership skills).

175. Gilbride-West, *supra* note 174.

176. Anat Shoshani & Michelle Slone, *Positive Education for Young Children: Effects of a Positive Psychology Intervention for Preschool Children on Subjective Well Being and Learning Behaviors*, 8 FRONTIERS PSYCH. 1, 6–7 (2017).

177. Yukun Zhao et al., *Positive Education Interventions Prevent Depression in Chinese Adolescents*, 10 FRONTIERS PSYCH. 1, 5–7 (2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6582777/> [<https://perma.cc/PA7G-RQV3>].

178. Diane Ravitch, *50 States, 50 Standards: The Continuing Need for National Voluntary Standards in Education*, 14 BROOKINGS REV. 6 (1996).

179. *Structure of the U.S. Education System: Curriculum and Content Standards*, U.S. DEP’T OF EDUC. (2008), <https://www2.ed.gov/about/offices/list/ous/international/usnei/us/standards.doc> [<https://perma.cc/4EFB-RPYH>].

180. *See generally A Worldwide Push for Integrated Care*, 47 MONITOR ON PSYCH. 8, 8 (Jan. 2016), <https://www.apa.org/monitor/2016/01/integrated-care> [<https://perma.cc/DLW7-QRZP>].

181. *See generally* WORLD HEALTH ORG., INTEGRATING MENTAL HEALTH INTO PRIMARY CARE: A GLOBAL PERSPECTIVE 47–185 (2008), https://apps.who.int/iris/bitstream/handle/10665/43935/9789241563680_eng.pdf?sequence=1&isAllowed=y [<https://perma.cc/72DL-U3X6>].

182. Jürgen Zielasek & Wolfgang Gaebel, *Mental Health Law in Germany*, 12 BJPSYCH INT’L 14, 14 (2015).

183. Specifically, like the United States, Germany is a type of republic and incorporates federalism.

health and safety legislation.¹⁸⁴ In recognition of a gap between hospital and outpatient treatment, Germany implemented social psychiatric services meant to complement psychiatric care.¹⁸⁵ Norway also provides an example for the United States. In Norway, clinical psychologists are required by law to be part of primary-care teams;¹⁸⁶ healthcare coverage, including mental healthcare, is universally provided; care coordination is mandated; and there is consistent communication between providers through electronic records.¹⁸⁷

While the United States has options to look at abroad, examples of integrated care are already found here as well. In California, the Integrated Behavioral Health Project accelerates the integration of mental health services into primary care settings by providing toolkits, legal frameworks, and resources to providers.¹⁸⁸ In Minnesota, the Depression Improvement Across Minnesota Offering a New Direction program implemented an interdisciplinary team-based approach for treating patients with depression in primary care settings.¹⁸⁹ In Massachusetts, the Massachusetts Child Psychiatry Access Project provides for the integration of children's behavioral healthcare alongside their primary care.¹⁹⁰

Although these are commendable, they are not uniform. Under these models, a person with depression in Minnesota would get integrated care but a person with bipolar disorder would not; an adolescent in Massachusetts would get integrated care but an adult would not. While natural variation is bound to occur across state lines, it should not be the case that differences in mental healthcare across states are so vast that geography alone predetermines a ceiling for mental health wellness. The United States already requires uniformity in requirements that hospitals must meet to participate in Medicare and Medicaid programs, including basic hospital functions.¹⁹¹ The federal government needs to mirror the approach taken to standardize physical health to mental health; the government should entice

184. *Health in Germany—The Most Important Developments*, ROBERT KOCH INST. 45 (2015), https://www.rki.de/EN/Content/Health_Monitoring/Health_Reporting/HealthInGermany/Health-in-Germany_most_important_developments.pdf?__blob=publicationFile [<https://perma.cc/P6LB-USZN>].

185. Hans Joachim Salize, Wulf Rössler & Thomas Becker, *Mental Health Care in Germany: Current State and Trends*, 257 EUR. ARCHIVES PSYCHIATRY & CLINICAL NEUROSCIENCE 92, 97 (2006).

186. *A Worldwide Push for Integrated Care*, *supra* note 180, at 9.

187. Roosa Tikkanen et al., *International Health Care System Profiles: Norway*, COMMONWEALTH FUND (June 5, 2020), <https://www.commonwealthfund.org/international-health-policy-center/countries/norway> [<https://perma.cc/YT32-85K8>].

188. *Successful Examples of Integrated Models*, PRIMARY CARE COLLABORATIVE, <https://www.pcpcc.org/content/successful-examples-integrated-models> [<https://perma.cc/DU8B-GCEJ>] (last visited Jan. 30, 2021); INTEGRATED BEHAVIORAL HEALTH PARTNERS, <http://www.ibhpartners.org/> [<https://perma.cc/ZE8G-DTD5>] (last visited Jan. 30, 2021).

189. *See Successful Examples of Integrated Models*, *supra* note 188; *DIAMOND for Depression*, ICSI, <https://www.icsi.org/programs/legacy-work/diamond-for-depression/> [<https://perma.cc/DU8B-GCEJ>] (last visited Jan. 30, 2021).

190. *Successful Examples of Integrated Models*, *supra* note 188; MASS. CHILD PSYCHIATRY ACCESS PROGRAM, <https://www.mcpap.com/About/OverviewVisionHistory.aspx> [<https://perma.cc/VBF4-9U7A>] (last visited Jan. 30, 2021).

191. *See* 42 C.F.R. § 482 (2010).

states to adopt vertical integration and wellness models by conditioning federal funding on adoption of them. Without laws calling for the standardized implementation of these evidence-based practices, we will get more of the same: a patchwork of well-intentioned but floundering systems.

C. Limitations

While the empirical analysis in this Note used credible and reliable data, there are several limitations to acknowledge. First, the states chosen showed significant differences on key covariates, suggesting that differences in other characteristics among the states might have confounded the regressions.¹⁹² This error can be seen within the final model regression results—the covariates, which would be insignificant with balanced groups, were all highly statistically significant here.

Second, the use of 3 states out of 50, while necessary for this type of comparison, yields a narrow view and does not account for things like discrepancies in state funding, population size, and total geographic area served.¹⁹³ Third, this analysis wholly disregards children and developmentally disabled persons who may benefit from mental health services in different ways. Moreover, this analysis does not take into account early intervention and preventative programs available in each state. Differences in this particular area could substantially alter the interpretation of the results. For example, a state that heavily invests in early intervention may see lower numbers of poor mental health days at the baseline, and thus reductions would be small and difficult to detect. On the other hand, high numbers of poor mental health days in states that invest in early intervention could indicate a population with more severe mental illness that is treatment resistant, an outlier, and thus it would not make sense to expect law to change it—it would be the wrong avenue.

Fourth, the outcome variable is imperfect for the conclusions that this analysis attempts to draw. The outcome variable was chosen due to practicality—it was available longitudinally for all three states. However, this variable fails to account for a number of factors such as an operational definition of what “bad mental health day” is, whether a person has a mental health diagnosis, the severity of illness, and life circumstances that can cause “bad mental health days” but are not mental illness (such as the normal human experience of grief).

Lastly, such an analysis completely disregards all other events—political, legal, and others—that can be a catalyst for change (both for better and for worse). September 11, 2001, triggered a surge of mental health issues nationwide.¹⁹⁴ The Great Recession of 2008 brought great emotional depression.¹⁹⁵ The 2016 election

192. See *supra* Section IV.B; see *infra* Appendix 5–6.

193. Some of this variation may have been captured and accounted for through the dummy-coding of the treated data.

194. See, e.g., Roxane Cohen Silver et al., *Nationwide Longitudinal Study of Psychological Responses to September 11*, 288 JAMA 1235, 1235 (2002) (finding that 17% of the U.S. population outside of New York City experienced posttraumatic stress).

195. See, e.g., Kaushal Mehta et al., *Depression in the US Population During the Time Periods Surrounding the Great Recession*, 76 J. CLINICAL PSYCHIATRY 499, 499 (2015) (finding “a significant and sustained increase in major depression prevalence in the U.S. population” during and after the recession).

ushered in a time of anxiety.¹⁹⁶ This list could go on. Laws are far from the only thing that affect people's mental health. It is not possible in this analysis to parse out environmental effects of trauma versus changes due to inadequate access to care. Finally, an analysis that tries to separate out the effects of state and federal law, while a worthwhile endeavor, is bound to have flaws—the two do not exist in a vacuum. For instance, as previously mentioned, the ACA allowed for expansion of Medicaid, but states had to execute it.¹⁹⁷ This is just one example showing the intertwined nature of state and federal laws—both exist alongside and in partnership with each other.

To address these limitations, future research should be cognizant of these shortcomings and aim to use data that have more holistic measures that can account for the various complexities of factors affecting mental health. Ideally, a future researcher would conduct his or her own longitudinal study in order to ensure that these limitations are minimized. Endogenous treatment effects also inherently exist in this type of analysis. Endogeneity occurs when an unobserved variable is correlated with both the outcome and the error term, such as when individuals who are more likely to benefit from a treatment are the ones who seek it.¹⁹⁸ Future researchers should be cognizant of endogeneity issues and utilize available statistical techniques to account for this bias.¹⁹⁹

CONCLUSION

In sum, an empirical analysis comparing whether federal or state law has a greater effect on subjective mental health shows that state law had a marginally more significant effect, both statistically and practically. However, neither state nor federal law had a particularly large effect. This same conclusion, that both laws are not particularly effective, was echoed in the graphical plots of mental health service utilization. Altogether, despite a rich history of attempted changes, mental health in the United States continues to be an issue in dire need of reform through federally incentivized state adoption of empirically based systems of care.

This type of system is exactly what John Goss wanted out of the *Sarn* lawsuit. John died at age 48, several months before its conclusion.²⁰⁰ He never got

196. See, e.g., Jenny Gold, 'Post-Election Stress Disorder' Sweeps the Nation, PBS NEWSHOUR (Feb. 23, 2017), <https://www.pbs.org/newshour/health/post-election-stress-disorder-sweeps-nation> [<https://perma.cc/3ZPQ-CU7F>].

197. See *supra* note 64.

198. JEFFREY M. WOOLDRIDGE, INTRODUCTORY ECONOMETRICS: A MODERN APPROACH 88 (2009); Lung-Fei Lee & Patricia Reagan, *Evaluating Endogenous Treatment Effects When the Decision to Treat Is Made at an Aggregate Level and Outcomes Are Observed at the Individual Level*, OHIO STATE UNIV. INST. FOR POPULATION RSCH., <https://ipr.osu.edu/evaluating-endogenous-treatment-effect> [<https://perma.cc/9SP8-LK3W>] (last visited Jan. 16, 2021).

199. See, e.g., Francis Vella & Marno Verbeek, *Estimating and Interpreting Models with Endogenous Treatment Effects*, 17 J. BUS. ECON. STATS. 473 (1999); Massimiliano Bratti & Alfonso Miranda, *Endogenous Treatment Effects for Count Data Models with Endogenous Participation or Sample Selection*, 20 HEALTH ECON. 1090 (2011); Lee & Reagan, *supra* note 198; Joseph V. Terza, *Estimating Count Data Models with Endogenous Switching: Sample Selection and Endogenous Treatment Effects*, 84 J. ECONOMETRICS 129 (1998).

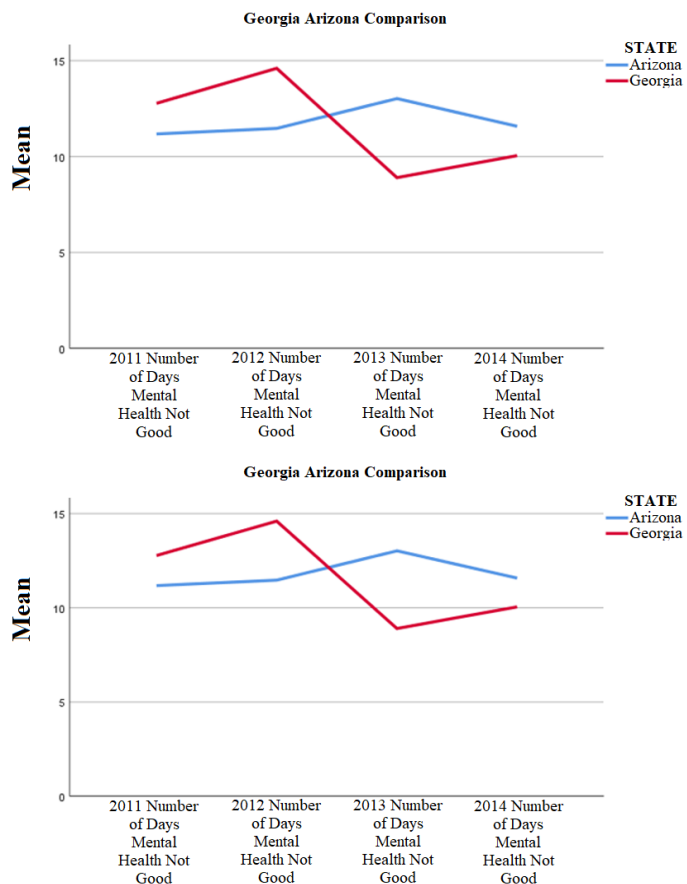
200. *Arnold v. Ariz. Dep't of Health Servs.*, 775 P.2d 521, 526 (Ariz. 1989).

to see that he was right, that the law was supposed to protect and provide for people like him. On the other hand, he did not have to see the decades-long struggle to get this seemingly simple proposition—that laws will do what they say they will—into practice; he did not have to see just how far we have not come.

APPENDIX

1. GEORGIA AS A COMPARISON STATE FOR THE STATE-LEVEL ANALYSIS

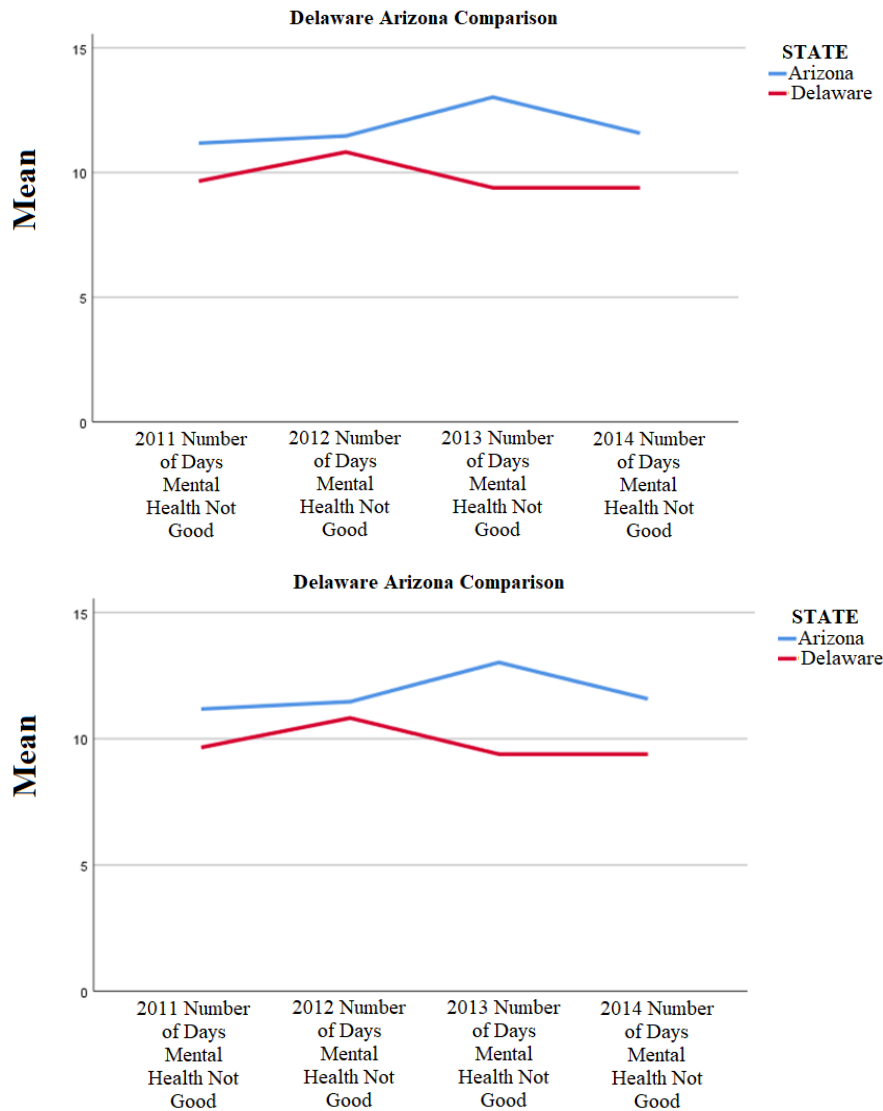
The settlement agreement following *United States v. Georgia*²⁰¹ mirrors the provisions of the *Sarn* settlement. However, the year of the settlement overlapped with the MHPAEA and the trend-line pre-*Sarn* violated the assumption of parallelism.



201. Settlement Agreement at 12–23, *United States v. Georgia*, No. 1:10-CV-249-CAP (D. Ga. Oct. 19, 2010), <https://dbhdd.georgia.gov/organization/be-informed/reports-performance/ada-settlement-agreement> [<https://perma.cc/B95E-HZ3Z>].

2. DELAWARE AS A COMPARISON STATE FOR THE STATE-LEVEL ANALYSIS

The settlement agreement following *United States v. Delaware* called for the creation and provision of many of the same services that *Sarn* did.²⁰² However, just as was the case with Georgia, the timing overlapped with the MHPAEA and the parallelism assumption was violated.

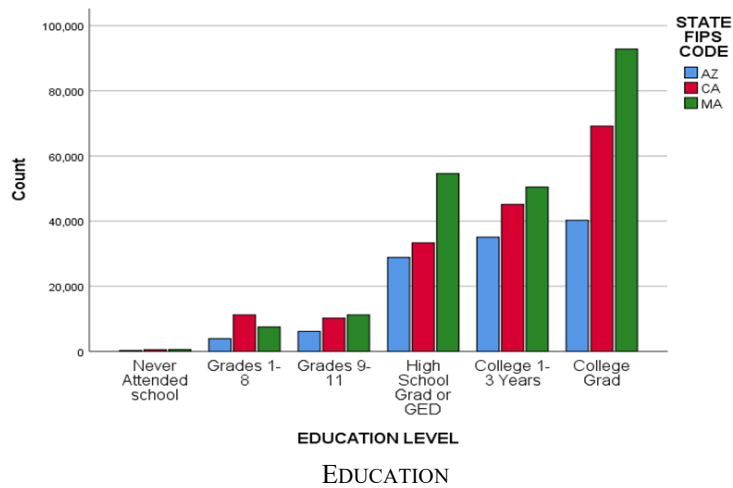
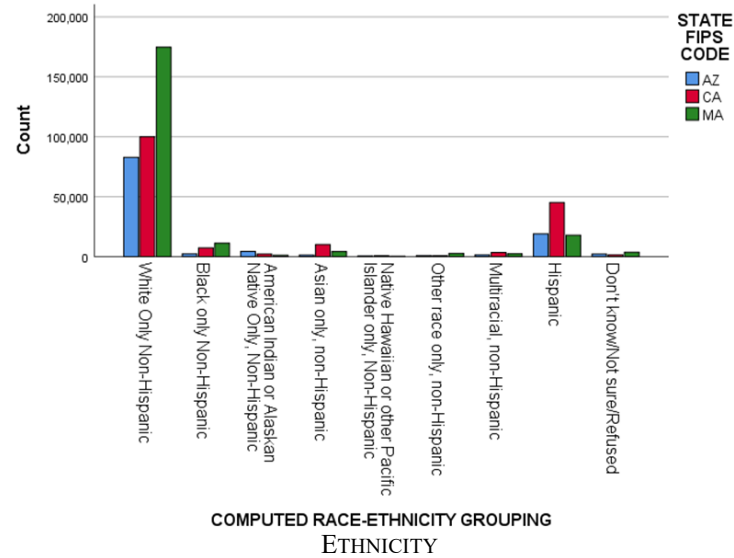


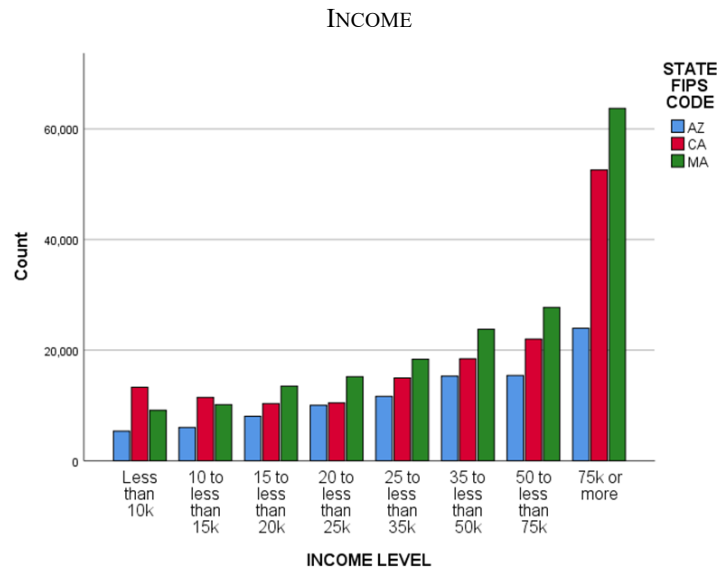
202. Settlement Agreement, *United States v. Delaware*, No. 11-cv-591 (D. Del Oct. 26, 2012), <https://www.clearinghouse.net/chDocs/public/PB-DE-0003-0002.pdf> [<https://perma.cc/UE9F-CH9E>].

3. TABLE OF DEMOGRAPHICS

	Sex (%Female)			Ethnicity (%)									Age (average category)			Marital Status (% Married)			Education (average category)			Income (average category)		
	AZ	CA	MA	AZ			CA			MA			AZ	CA	MA	AZ	CA	MA	AZ	CA	MA	AZ	CA	MA
2003	62.0%	58.8%	60.1%	75.7%	14.8%	9.6%	64.8%	21.3%	13.9%	81.3%	8.4%	10.3%	45-54	45-54	45-54	57.4%	50.6%	47.5%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2004	62.6%	59.6%	60.8%	68.9%	23.5%	7.6%	61.6%	25.3%	13.1%	80.7%	9.1%	10.2%	45-54	45-54	45-54	58.5%	51.2%	48.7%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2005	62.6%	60.6%	61.7%	67.4%	24.2%	8.4%	61.7%	25.2%	13.1%	80.7%	9.4%	9.9%	45-54	45-54	45-54	58.0%	52.9%	49.3%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2006	62.4%	60.1%	62.6%	68.7%	22.8%	8.5%	63.6%	23.2%	13.2%	80.6%	9.4%	9.9%	45-54	45-54	45-54	57.7%	52.5%	49.3%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2007	63.6%	61.7%	64.6%	68.5%	22.7%	8.8%	62.3%	22.5%	15.2%	82.6%	7.8%	9.6%	45-54	45-54	45-54	56.9%	53.4%	49.5%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2008	63.1%	60.6%	63.4%	69.3%	21.8%	8.9%	63.2%	23.4%	13.4%	79.3%	9.5%	11.2%	55-64	45-54	45-54	57.2%	53.6%	49.5%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2009	62.1%	62.2%	62.8%	75.0%	15.5%	9.5%	63.4%	24.4%	12.2%	80.5%	8.5%	11.0%	55-64	45-54	45-54	55.7%	54.2%	50.6%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
2010	63.0%	60.6%	62.4%	73.9%	15.8%	10.3%	63.9%	23.6%	12.5%	81.0%	7.7%	11.3%	55-64	45-54	45-54	55.9%	53.9%	50.8%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2011	61.1%	59.3%	62.0%	72.0%	17.1%	10.9%	63.0%	24.2%	12.8%	79.7%	7.7%	12.6%	55-64	45-54	45-54	53.9%	51.0%	47.3%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2012	59.1%	57.5%	60.1%	72.8%	15.6%	11.6%	60.0%	25.0%	15.0%	77.9%	8.3%	13.8%	55-64	45-54	45-54	51.8%	49.3%	46.0%	1-3 yrs College	1-3 yrs College	1-3 yrs College	35-50k	50-75k	50-75k
2013	59.3%	57.1%	60.5%	71.5%	16.6%	11.9%	60.2%	24.7%	15.1%	78.8%	9.3%	11.9%	45-54	45-54	45-54	52.3%	50.1%	48.2%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
2014	59.2%	42.7%	60.5%	72.2%	15.9%	11.9%	61.4%	23.8%	14.8%	78.8%	9.2%	12.0%	45-54	45-54	45-54	52.8%	50.4%	48.6%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
2015	58.7%	56.8%	60.4%	70.8%	17.0%	12.2%	59.9%	25.0%	15.1%	78.4%	9.5%	12.1%	45-54	45-54	45-54	52.9%	50.8%	48.4%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
2016	58.4%	56.7%	60.2%	70.2%	17.4%	12.4%	60.2%	24.7%	15.1%	78.0%	9.6%	12.4%	45-54	45-54	45-54	52.8%	50.4%	48.4%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
2017	58.7%	56.6%	60.1%	70.8%	17.1%	12.1%	50.0%	24.8%	25.2%	78.1%	9.6%	12.3%	45-54	45-54	45-54	53.1%	50.5%	48.5%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
2018	58.3%	56.6%	60.0%	70.0%	17.6%	12.4%	59.5%	25.1%	15.4%	77.8%	9.7%	12.4%	45-54	45-54	45-54	52.9%	50.4%	48.3%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
All years	59.6%	56.8%	60.8%	72.1%	16.5%	11.4%	58.3%	26.3%	15.4%	79.9%	8.2%	11.9%	55-64	45-54	45-54	53.8%	50.5%	48.3%	1-3 yrs College	1-3 yrs College	1-3 yrs College	50-75k	50-75k	50-75k
Overall	59.2%			70.8% White			16.2% Hispanic			13% Other			45-54			50.3%			1-3 Years College			50-75k		

4. DEMOGRAPHICS GRAPHS





5. MANN-WHITNEY U-TEST FOR DIFFERENCES BETWEEN AZ AND CA

	State	N	Mean Rank	Sum of Ranks	Mann-Whitney U
Physical Health	AZ	34400	49441.52	1700788303.00	997668097.000
	CA	61243	46912.32	2873051243.00	$p < .001$
	Total	95643			
Health Insurance	AZ	34813	48468.92	1687348653.50	1057029762.500
	CA	61425	47921.46	2943575787.50	$p < .001$
	Total	96238			
Sex	AZ	34919	49312.45	1721941432.00	1036938920.000
	CA	61548	47622.15	2931047846.00	$p < .001$
	Total	96467			
Marital Status	AZ	34721	45821.70	1590975390.50	988184109.500
	CA	61307	49256.38	3019761015.50	$p < .001$
	Total	96028			
Education Level	AZ	34820	46983.51	1635965807.50	1029732197.500
	CA	60982	48425.66	2953093695.50	$p < .001$
	Total	95802			
Employment Status	AZ	34692	50814.21	1762846713.50	948801428.500
	CA	60817	46009.92	2798185581.50	$p < .001$
	Total	95509			
Income Level	AZ	30017	41321.23	1240339360.50	789814207.500
	CA	56400	44213.70	2493652792.50	$p < .001$
	Total	86417			
Ethnicity	AZ	34934	44242.82	1545578839.50	935369194.500
	CA	61548	50511.11	3108857563.50	$p < .001$
	Total	96482			
Age	AZ	34934	53027.85	1852474966.00	907887445.000
	CA	61549	45525.64	2802057920.00	$p < .001$
	Total	96483			

6. MANN-WHITNEY U-TEST FOR DIFFERENCES BETWEEN AZ AND MA

	State	N	Mean Rank	Sum of Ranks	Mann-Whitney U
Physical Health	AZ	34400	53968.64	1856521221.00	1146409579.000
	MA	70094	51402.82	3603029044.00	$p < .001$
	Total	104494			
Health Insurance	AZ	34813	50526.24	1758970112.00	1152980221.000
	MA	71012	54083.09	3840548113.00	$p < .001$
	Total	105825			
Sex	AZ	34919	53220.95	1858422424.00	1238054820.000
	MA	71216	52993.00	3773949756.00	$p < .001$
	Total	106135			
Marital Status	AZ	34721	49548.10	1720359524.00	1117568243.000
	MA	70664	54238.26	3832692281.00	$p < .001$
	Total	105385			
Education Level	AZ	34820	50731.09	1766456452.50	1160222842.500
	MA	70872	53885.82	3818995825.50	$p < .001$
	Total	105692			
Employment Status	AZ	34692	56492.11	1959824227.00	1093817651.000
	MA	70675	50814.73	3591330801.00	$p < .001$
	Total	105367			
Income Level	AZ	30017	41792.97	1254499513.00	803974360.000
	MA	60817	47206.43	2870953682.00	$p < .001$
	Total	90834			
Ethnicity	AZ	34934	56715.56	1981301336.50	1117082458.500
	MA	71225	51296.85	3653618383.50	$p < .001$
	Total	106159			
Age	AZ	34934	56907.07	1987991695.50	1110392099.500
	MA	71225	51202.92	3646928024.50	$p < .001$
	Total	106159			