The Effects of Medicaid Eligibility on Mental Health Services and Out-of-Pocket Spending for Mental Health Services

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Objective. Millions of low-income Americans will gain health insurance through Medicaid under the Affordable Care Act. This study assesses the impact of previous Medicaid expansions on mental health services utilization and out-of-pocket spending.

Data Sources. Secondary data from the 1998–2011 Medical Expenditure Panel Survey Household Component merged with National Health Interview Survey and state Medicaid eligibility rules data.

Study Design. Instrumental variables regression models were used to estimate the impact of expanded Medicaid eligibility on health insurance coverage, mental health services utilization, and out-of-pocket spending for mental health services.

Data Extraction Methods. Person-year files were constructed including adults ages 21–64 under 300 percent of the Federal Poverty Level.

Principal Findings. Medicaid expansions significantly increased health insurance coverage and reduced out-of-pocket spending on mental health services for low-income adults. Effects of expanded Medicaid eligibility on out-of-pocket spending were strongest for adults with psychological distress. Expanding Medicaid eligibility did not significantly increase the use of mental health services.

Conclusions. Previous Medicaid eligibility expansions did not substantially increase mental health service utilization, but they did reduce out-of-pocket mental health care spending.

Key Words. Mental health services, Medicaid, out-of-pocket spending, instrumental variables

The Affordable Care Act (ACA) extends health insurance to millions of Americans through state Medicaid expansions and subsidized health insurance purchased in the federal and state marketplaces. Because mental disorders are correlated with both lower incomes and with uninsurance, people with mental illnesses may benefit greatly from the ACA's Medicaid

expansions—which covers families and individuals up to 138 percent of the federal poverty level in states that choose to participate (Garfield et al. 2011). Recent studies find that while the uninsured but newly Medicaid-eligible population is healthier than those previously enrolled in Medicaid, it has a higher prevalence of physical and mental health problems than the uninsured who have incomes above the ACA's Medicaid income eligibility limit (Decker et al. 2013; Tsai, Pilver, and Hoff 2014). The ACA also strengthens mental health insurance benefits by including mental health services among its Essential Health Benefits, and by requiring health plans to comply with the 2008 federal Mental Health Parity and Addiction Equity Act (Garfield, Lave, and Donohue 2010).

This paper assesses the effect of expanded Medicaid eligibility on nonelderly adults' use of mental health services and out-of-pocket spending for mental health services. It is not entirely clear how gaining Medicaid eligibility will affect mental health services utilization. Uninsurance is a major barrier to obtaining mental health services (Rowan, McAlpine, and Blewett 2013), and people are more responsive to prices of mental health services than general medical services (Frank and McGuire 2000), suggesting that gaining Medicaid may substantially increase utilization relative to being uninsured. In addition, Medicaid mental health benefits are historically more comprehensive than services offered in private insurance plans (Garfield, Lave, and Donohue 2010). Reflecting these factors, state officials have expressed fears that expanding Medicaid under the ACA may overwhelm mental health resources and lead to substantial increases in Medicaid mental health services expenditures (Sommers et al. 2013). On the other hand, adults who gain Medicaid may face barriers to care that limit their mental health services utilization. For example, the existing supply of mental health professionals may be insufficient to meet increased demand from newly insured Medicaid recipients, as much of the country has shortages of mental health providers (Thomas et al. 2009). In addition, Medicaid provider reimbursements are generally lower than private insurance reimbursements, which can discourage providers from accepting new Medicaid patients (Decker 2012). Finally, Medicaid expansions may simply transfer some people from private insurance to Medicaid (also known as “crowd-out”),

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and for those people the incentives to use mental health services may not substantially change.

Relatively little research examines the effects of Medicaid expansions on utilization and out-of-pocket spending for mental health care. Recent studies examining health reform in Massachusetts and the ACA's dependent coverage expansion found that health insurance expansions led to reduced emergency department use for mental health diagnoses (Meara et al. 2014; Golberstein et al. 2015) and increases in overall rates of service use for young adults with mental health symptoms (Saloner and Le Cook 2014). Those studies reported mixed findings on inpatient use for mental health diagnoses (Meara et al. 2014; Golberstein et al. 2015). The recent randomized study of expanding Medicaid in Oregon included some limited mental health services outcomes, and it found that gaining Medicaid led to significant increases in depression diagnoses, a marginally significant increase in prescriptions for depression, and no effects on emergency department use for mental health problems (Baicker et al. 2013; Taubman et al. 2014). Two recent studies of a public insurance expansion in different areas of Wisconsin found disparate effects of public insurance on behavioral health services (DeLeire et al. 2013; Burns et al. 2014).

Our paper builds on existing research in several ways. We study the effects of state Medicaid expansions for adults using nationally representative data on expansions across all states between 1998 and 2011. During this period, many states altered their income thresholds for Medicaid eligibility for parents and/or childless adults. We also examine the effects of Medicaid eligibility on out-of-pocket spending for mental health services, along with the effects on mental health services use.

METHODS

The primary data for this study are from the 1998–2011 Medical Expenditure Panel Survey (MEPS) Household Component. The MEPS is the most comprehensive source of information on patterns of health care use and spending that is nationally representative of the civilian noninstitutionalized U.S. population. The MEPS is administered annually by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics. A new cohort of households enters the MEPS sample each year and is interviewed five times to collect two calendar years of data. The MEPS collects detailed information from households about their use of office-based and

hospital services, prescription drugs, and other health care services utilization, and supplements this with information from the survey respondents' medical providers.

A useful feature of the MEPS sample is that it is drawn from the National Health Interview Survey (NHIS). The NHIS records basic health information for each household member and collects more detailed health information from one randomly selected "sample adult" in each household. AHRQ provides linkage files that allow users to merge observations in the MEPS data with their information from the NHIS, which allows us to identify individuals with mental health problems in the NHIS interview, prior to their MEPS observation. The NHIS has collected the Kessler-6 (K6) measure of psychological distress from the "sample adult" in each household since 1997 (Kessler et al. 2002). On the basis of a 24-point scale, we identified adults with K6 scores of 5 or higher as being symptomatic of at least moderate psychological distress. A recent validation study found that this was the optimal cutpoint for identifying moderate or worse mental distress in terms of need for mental health services (Prochaska et al. 2012).

Our analytic sample is restricted to adults aged 21–64 years residing in households under 300 percent of the Federal Poverty Level (FPL) based on the MEPS measure of annual family income (family is defined by the "health insurance unit," which only includes family members most likely considered eligible for private and public family health plans). We also restricted to individuals who did not report receiving Supplemental Security Income in the previous year, as that is a separate and usually direct route to Medicaid eligibility. We restricted our sample to nonelderly adults below 300 percent FPL to focus on the lower income households that were actually affected by state Medicaid expansions, as the most generous Medicaid eligibility in any state during our study period was 275 percent FPL. Between 1998 and 2011, states had discretion in setting Medicaid income eligibility levels for parents and childless adults. Approximately half the states amended their Medicaid eligibility thresholds for parents between 1998 and 2011. Many states significantly increased their eligibility thresholds (e.g., New York raised eligibility for working parents from 60 percent FPL in 2008 to 150 percent FPL in 2011), while other states only made modest increases or maintained relatively constant eligibility thresholds (e.g., Hawaii and Massachusetts consistently covered parents earning less than 100 percent and 133 percent FPL, respectively). Very few states reduced their Medicaid eligibility thresholds for parents while 17 states extended Medicaid coverage to childless adults during this period.

A restricted data agreement with AHRQ allowed us to access state identifiers for the MEPS. We used these identifiers to merge data on Medicaid eligibility rules for parents and childless adults based on each respondent's state of residence, year, and whether they had children living with them in household. Medicaid income eligibility thresholds were extracted from annual reports by the Kaiser Family Foundation and the Center on Budget and Policy Priorities (Broadbush et al. 2001; Heberlein et al. 2011).

As an individual's actual Medicaid eligibility is determined by his or her family income, actual Medicaid eligibility is endogenous and is likely correlated with unobserved determinants of mental health service use. Ignoring that would lead to biased estimates of the effect of Medicaid eligibility. This concern is especially important in the context of mental health services because of the close links between income and mental health status. To address that endogeneity, we followed prior research used an instrumental variables approach that relies on a measure of "simulated" Medicaid eligibility (Currie and Gruber 1996; Cutler and Gruber 1996; Gruber and Simon 2008). A valid instrument for actual Medicaid eligibility is a variable that is closely correlated with actual eligibility, but it is uncorrelated with other determinants of mental health services use. The simulated eligibility measure meets these criteria because it only captures individual-level variation in actual Medicaid eligibility that is driven by changes in income eligibility thresholds within states and over time.

To create the simulated eligibility measure, we took the following four steps. (1) We defined mutually exclusive "cells" based on age (21–34, 35–49, 50–64), family structure (defined by sex, marital status, and zero, one, or two or more children under 18), race (white or non-white), and education (<12 and ≥12 years of education) for each cross-sectional year of MEPS. After combining several cells due to small sample sizes, this yielded 105 cells exhaustively representing all combinations of demographic-household type. (2) Next, we randomly selected 300 observations from each cell using the pooled 1998–2011 MEPS sample. (3) For each state-year combination, we assigned each person in that random sample as being eligible for Medicaid if his or her family income was beneath the income criteria for Medicaid based on the specific state-year eligibility rules (as noted earlier, family was defined as the "health insurance unit"). Medicaid eligibility was determined separately for parents and childless adults, as Medicaid eligibility rules differ for both groups. (4) After determining Medicaid eligibility for each person under each state-year scenario, we estimated the proportion of adults eligible for Medicaid in each cell, for each state-year cell. We then used this simulated eligibility measure as an instrument for each

individual's actual Medicaid eligibility in the first stage (Equation 1) of the following instrumental variables (IV) models:

$$\text{Medicaid Eligibility}_{ijt} = \text{Instrument}_{ijt} + \text{Cells}_i + X_i + \text{State}_j + \text{Year}_t + \mu_{ijt} \quad (1)$$

$$\text{Outcome}_{ijt} = \widehat{\text{Medicaid Eligibility}}_{ijt} + \text{Cells}_i + X_i + \text{State}_j + \text{Year}_t + \mu_{ijt} \quad (2)$$

In these models, “Instrument” is the measure of simulated Medicaid eligibility, and “Cells” represents a full set of 105 dummy variables for permutations of age group, family structure, race, and education. X is a set of individual control variables, including linear age, education (less than high school, high school diploma, some college, or at least a college degree), race/ethnicity (non-Hispanic white, non-Hispanic black, non-Hispanic Asian/Pacific Islander, non-Hispanic “other”, or Hispanic), and residence in a metropolitan area. $State$ and $Year$ are full sets of dummy variables for state of residence and MEPS survey year, respectively. We used this instrumental variables approach to estimate the effects of Medicaid eligibility on three outcome domains (Equation 2). The first outcome domain is health insurance status. The effects of Medicaid eligibility expansions on insurance are well documented (Gruber and Simon 2008), and we examine this outcome domain largely to help interpret the results for the other outcome domains. We estimate the likelihood of Medicaid enrollment at any point during the year, along with the likelihood of having any insurance at any point during the year and having private insurance at any point during the year.

The second outcome domain is utilization of mental health services within the calendar year. Mental health services were identified by the following criteria: a visit was for psychotherapy or another mental health treatment; or a mental health diagnosis (ICD-9 codes 295–302; 305–314) was associated with the visit; or a psychotropic drug was prescribed. We examine the probability of using any mental health services in the calendar year, and the total amount of utilization for specific types of services, including the number of outpatient visits, the number of inpatient days, and the number of prescriptions filled. Our final outcome domain is annual out-of-pocket spending on mental health services. The MEPS includes the amount paid out-of-pocket for each service used, and we sum this spending over all mental health service categories in the calendar year.

We estimated IV models for binary outcomes (insurance status and any mental health services use) and count outcomes (amount of mental health

services use) using two-stage least squares. Nonlinear models such as probit (for binary outcomes) or negative binomial (for count outcomes) with two-stage residual inclusion (2SRI) are generally preferable for modeling binary or count outcomes in an IV framework (Terza, Basu, and Rathouz 2008), but in many instances, the 2SRI models did not converge. However, two-stage least squares generally performs well for binary outcomes (Angrist and Pischke 2009), and where we were able to compare the two-stage least squares results with the marginal effects from the analogous probit or count models, the results were quite similar in magnitude and significance.

For out-of-pocket mental health spending, we estimated two-part models with a probit first stage and a generalized linear model second stage with a log link and gamma variance family. We chose these functional forms based on model selection criteria prescribed by Deb, Manning, and Norton (2014). We implemented the instrumental variables two-part models with the 2SRI approach to IV estimation, using the “tpm” routine in Stata (Terza, Basu, and Rathouz 2008; Belotti et al. 2015). The 2SRI approach generally requires bootstrapping standard errors to account for the error in the included residual. However, we were unable to successfully implement our models with a bootstrap that reflected the MEPS sample design, and as such, our two-part model’s standard error estimates may be downward-biased. We do not think this affects our inference in any meaningful way, as we compared various instrumental variables models that did and did not account for the error in the generated residual, and in all cases the standard errors were very similar, likely owing to the very strong first-stage relationship (and thus relatively little error in the generated residual term). All of our models use sampling weights to account for the complex MEPS sample design, and we cluster standard errors on the state (Bertrand, Duflo, and Mullainathan 2004). For ease of interpretation, we report marginal effects from all models. We first estimate each model for the full MEPS sample and then separately for the MEPS-NHIS sample of adults with and without psychological distress during their NHIS “sample adult” interview. This research was deemed “exempt” from review by the University of Minnesota Institutional Review Board.

RESULTS

Table 1 presents descriptive statistics, insurance coverage, and mental health services utilization for the full sample and then separately for adults without psychological distress ($K6 < 5$) and adults with moderate or severe psycholog-

Table 1: Descriptive Characteristics, by Study Sample, of Medical Expenditure Panel Survey (MEPS), 1998–2011*

	<i>Full MEPS Sample</i> (<i>N</i> = 121,611)	<i>MEPS-NHIS Linked</i> <i>Sample: No Psychological</i> <i>Distress (K6 < 5)</i> (<i>N</i> = 36,872)	<i>MEPS-NHIS Linked</i> <i>Sample: Moderate or</i> <i>Severe Psychological</i> <i>Distress (K6 ≥ 5)</i> (<i>N</i> = 12,818)
Age (mean)	38.5	39.1	40.4
Gender			
Male	47.2	45.3	36.4
Female	52.8	54.7	63.6
Race/ethnicity			
Non-Hispanic white	56.8	58.1	63.2
Non-Hispanic black	15.6	16.9	16.1
Non-Hispanic Asian	4.4	3.8	2.5
Non-Hispanic other/ multiple races	1.8	1.8	2.8
Hispanic	21.3	19.3	15.5
Education			
0–11 years	23.9	21.1	25.6
12 years	37.2	35.7	38.4
≥13 years	38.9	43.2	36.0
Married	46.3	41.7	30.9
Children in household	44.2	44.9	39.5
Urban	80.7	80.4	78.8
Any health insurance [†]	70.2	71.1	72.2
Any Medicaid coverage [†]	14.2	13.0	23.7
Any private health insurance [†]	55.1	58.1	45.3
Any mental health use	12.0	9.2	28.3
Any inpatient mental health use	0.3	0.2	0.9
Any ambulatory mental health use	6.6	4.8	16.8
Any prescription mental health use	10.3	7.6	25.3
Any emergency department mental health use	0.5	0.3	1.3
Any mental health out- of-pocket spending	9.6	7.1	23.0
Out-of-pocket spending on mental health services (mean)	\$28.68	\$15.33	\$86.52

*Values are in percentages unless otherwise noted.

[†]Sample sizes for the insurance outcomes are 120,970 for the full sample, 36,815 for the K6 < 5 sample, and 12,799 for the K6 ≥ 5 sample.

ical distress ($K6 \geq 5$) in the previous year. The full sample includes 121,611 person-year observations. The sample with linked NHIS K6 scores is smaller than the total MEPS sample because only a subset of MEPS respondents were interviewed as the “sample adult” in the prior year NHIS. All samples are racially and ethnically diverse and share similar education backgrounds. Adults with mental health problems are relatively less likely to be married or have children. Although more than 70 percent of the sample held health insurance, adults with psychological distress were more likely to be covered by Medicaid, report ambulatory and prescription mental health services utilization, and report higher levels of out-of-pocket mental health spending compared to adults without psychological distress.

Table 2 displays the effect of adult Medicaid expansions on health insurance status. First, Medicaid expansions significantly increased insurance coverage for low-income adults. Increasing Medicaid eligibility increases the likelihood of being enrolled in Medicaid by 27.7 percentage points in the full MEPS sample, and it increases the likelihood of having any insurance by 20.5 percentage points. The effects are similar for the two mental health categories defined by the NHIS K6 score. This effect is larger than other evaluations of state Medicaid expansions, reflecting the fact that we look at whether there was any Medicaid enrollment at any point in the calendar year, whereas other studies look at point-in-time insurance status. We find a marginally significant 4.2 percentage point reduction in private insurance in the full MEPS sample. The first-stage relationship between the simulated eligibility instrument and actual Medicaid eligibility is very strong. The F -statistic on the simulated eligibility instrument is 125 for the full MEPS sample, 152 for the subsample with NHIS K6 scores indicating no mental health problems, and 44 for respondents with NHIS K6 scores indicating at least mild psychological distress. All of these are well beyond the conventional criteria for acceptably strong instruments (Stock, Wright, and Yogo 2002).

Having established that adult Medicaid expansions significantly increase the likelihood of having Medicaid in the calendar year, we next examine the effects of Medicaid eligibility on the use of any mental health services in a calendar year (Table 3). Overall, we do not find that Medicaid eligibility significantly increases the use of mental health services. For the full MEPS sample (Column A), the likelihood of using any mental health services dropped by a nonsignificant 1.8 percentage points, and we are able to rule out an increase of 2.3 percentage points or greater with 95 percent confidence. We also do not find significant changes in any of the specific categories of mental health services. When we look at the NHIS subsample without psychological

Table 2: Effects of Medicaid Eligibility on Insurance Status

Outcome Variable	(A) Full MEPS Sample (N = 121,611) Marginal Effect (Standard Error) <i>p</i> -value	(B) MEPS-NHIS Linked Sample: No Psychological Distress (K6 < 5) (N = 36,872) Marginal Effect (Standard Error) <i>p</i> -value	(C) MEPS-NHIS Linked Sample: Moderate or Severe Psychological Distress (K6 ≥ 5) (N = 12,818) Marginal Effect (Standard Error) <i>p</i> -value
Medicaid	.277 (.044) <.001	.306 (.055) <.001	.225 (.068) .002
Any insurance	.205 (.046) <.001	.223 (.064) .001	.244 (.066) .001
Private insurance	-.042 (.248) .099	-.032 (.040) .426	-.031 (.066) .643
First-stage F-statistic	125.80	152.97	44.46

Note. Instrumental variables models estimated with two-stage least squares, with robust standard errors clustered on the state. Details on model specification are in the text.

distress (Column B), the results are similar, although we find a statistically significant 0.5 percentage point ($p = .01$) decrease in the likelihood of using any inpatient mental health care. For the NHIS subsample with moderate to severe psychological distress (Column C), we do not find any evidence of significant changes in the use of any mental health services in response to gaining Medicaid eligibility.

Although we find little evidence that Medicaid expansions affected the probability of using any mental health services, it is possible that overall levels of utilization could be affected by Medicaid eligibility. Table 4 reports the results from the models on number of mental health inpatient days, number of mental health ambulatory services, and number of mental health prescription fills. For each of these outcomes, we do not find that gaining Medicaid eligibility affects the level of mental health service utilization.

Finally, we examine the effects of gaining Medicaid eligibility on out-of-pocket spending for mental health services. Table 5 shows the results from the two-part models of annual out-of-pocket spending on mental health services, expressed as marginal effects that incorporate both parts of the model (the coefficients and marginal effects for both parts of the models are included in the Appendix). For the full MEPS sample, gaining Medicaid eligibility reduces average out-of-pocket spending by \$21, relative to a sample average of \$31 (Column A). Among the subpopulation without psychological distress, out-of-pocket spending declines by \$12. We find much

Table 3: Effects of Medicaid Eligibility on Any MH Service Use

Outcome variable	(A) Full MEPS Sample (N = 121,611) Marginal Effect (Standard Error) <i>p</i> -value	(B) MEPS-NHIS Linked Sample: No Psychological Distress (K6 < 5) (N = 36,872) Marginal Effect (Standard Error) <i>p</i> -value	(C) MEPS-NHIS Linked Sample: Moderate or Severe Psychological Distress (K6 ≥ 5) (N = 12,818) Marginal Effect (Standard Error) <i>p</i> -value
Any MH service use	−.018 (.020) .380	−.014 (.029) .616	−.048 (.055) .386
Any inpatient MH use	−.0019 (.002) .403	−.006 (.002) .010	−.003 (.009) .722
Any ambulatory MH use	−.005 (.011) .648	−.005 (.021) .811	−.040 (.047) .392
Any MH prescription use	−.011 (.016) .497	−.014 (.027) .608	.002 (.046) .966
Any emergency department MH use	.002 (.003) .377	.002 (.004) .585	.012 (.014) .393
First-stage <i>F</i> -statistic	125.80	152.97	44.46

Notes. Instrumental variables models estimated with two-stage least squares, with robust standard errors clustered on the state. Details on model specification are in the text.

stronger effects for people with moderate to severe psychological distress. In that subgroup, Medicaid eligibility led to a reduction of \$84 per year in out-of-pocket spending for mental health services, compared to the subsample average of \$90 per year. The overall reduction is driven by reductions in the level of out-of-pocket spending, conditional on having any out-of-pocket spending on mental health services (Table S1). Conditional on any out-of-pocket spending, gaining Medicaid eligibility reduces average out-of-pocket spending by \$175 for the full sample, \$135 for the subpopulation without psychological distress, and \$372 for the subpopulation with moderate to severe psychological distress.

DISCUSSION

Medicaid expansions hold the possibility of significantly improving mental health care for low-income populations. We do not find that recent state

Table 4: Effects of Medicaid Eligibility on MH Service Utilization

Outcome Variable	(A) Full MEPS Sample (N = 121,611) Marginal Effect (Standard Error) <i>p</i> -value	(B) MEPS-NHIS Linked Sample: No Psychological Distress (K6 < 5) (N = 36,872) Marginal Effect (Standard Error) <i>p</i> -value	(C) MEPS-NHIS Linked Sample: Moderate or Severe Psychological Distress (K6 ≥ 5) (N = 12,818) Marginal Effect (Standard Error) <i>p</i> -value
Annual inpatient MH days	−.071 (.079) .371	−.156 (.114) .180	−.0476 (.138) .730
Annual ambulatory MH services	.085 (.166) .611	−.091 (.345) .792	−.025 (.966) .979
Annual MH prescription drug fills	−.077 (.165) .643	−.142 (.216) .513	−1.085 (.731) .144
First-stage <i>F</i> -statistic	125.80	152.97	44.46

Notes. Instrumental variables models estimated with two-stage least squares, with robust standard errors clustered on the state. Details on model specification are in the text.

Table 5: Effects of Medicaid Eligibility on Annual MH Services Out-of-Pocket Spending

	(A) Full MEPS Sample (N = 121,315)	(B) MEPS-NHIS Linked Sample: No Psychological Distress (K6 < 5) (N = 36,694)	(C) MEPS-NHIS Linked Sample: Moderate or Severe Psychological Distress (K6 ≥ 5) (N = 12,651)
Marginal effect (\$)	−21.01	−12.22	−84.10
Standard error	(6.31)	(5.46)	(35.74)
<i>p</i> -value	.002	.030	.023
First-stage <i>F</i> -statistic	125.80	152.97	44.46

Notes. Marginal effects are from two-part models of out-of-pocket spending. Robust standard errors are clustered on the state. Details on model specification and estimation are in the text.

expansions of Medicaid eligibility to low-income adults led to significant increases in mental health services use. Our estimates for the probability of using any mental health services are fairly precise, such that we can rule out even moderate-sized increases in mental health services use. However, we cannot definitively rule out meaningful increases in utilization of specific types of mental health services, where our estimates are less precise.

However, focusing solely on mental health services utilization misses a key goal of health insurance, which is to protect against high out-of-pocket spending. We find that gaining Medicaid eligibility leads to significantly lower out-of-pocket spending for mental health services use. This effect is strongest where we would expect the greatest benefit—among those with mental health problems. Thus, even if expanding Medicaid eligibility does not necessarily improve access to or utilization of mental health services, it does offer the important and valuable benefit of improving financial protection by reducing out-of-pocket mental health services spending.

We are not able to directly assess why service use did not increase in response to expanded Medicaid eligibility, but we propose several explanations. One possibility is that managed care techniques for mental health services offset the effects of gaining insurance. That is a prominent explanation for why mental health parity has not led to increases in mental health service use (Barry, Frank, and McGuire 2006), and it may be especially relevant here, as Medicaid programs frequently use more heavily managed care techniques than private insurance (Draper, Hurley, and Short 2004). Another possible explanation is that as mental health providers are reported to be in shortage in much of the United States (Thomas et al. 2009), gaining Medicaid may not improve access to mental health services, particularly as Medicaid fees to providers are generally lower than private insurance or Medicare. Another related issue is that even without insurance, some low-income people are able to access some degree of mental health services from safety net providers (e.g., community health centers).

Our analyses have several important limitations. We examine the effects of gaining Medicaid eligibility, which differs from actually enrolling in Medicaid. Our IV approach identifies the causal effect of Medicaid eligibility, but this approach cannot deliver an unbiased estimate of the effect of Medicaid enrollment. The effects of actual Medicaid enrollment are likely to be larger than what we find in our analyses, as the take-up of Medicaid among eligible adults is well below 100 percent. One recent study found that among nonelderly adults without private insurance who were eligible for Medicaid, only 63 percent were actually enrolled in Medicaid (Sommers et al. 2012). Take-up rates are likely to be even lower for particularly disadvantaged populations, such as homeless adults (Tsai et al. 2013). Yet examining the effects of Medicaid eligibility is important because that is what policy makers can directly influence. Another limitation is that we do not assess whether mental health services were used appropriately, or whether they were of adequate quality. Researchers should continue to explore the role of gaining health insurance

on appropriate use of mental health services, especially as the ACA extends health insurance to millions of Americans.

CONCLUSIONS

Our findings have important implications for mental health services and health reform. If recent Medicaid expansions are informative for today, concerns about major increases in mental health service utilization and their associated costs under ACA Medicaid expansions (Sommers et al. 2013) may be somewhat overstated. From the perspective of individuals who will benefit from mental health services, however, our results are less encouraging. Even though uninsurance is a key barrier to receiving mental health services, we find that gaining Medicaid eligibility by itself does not necessarily increase mental health service use—even among those with mental health problems. Tracking the extent to which the ACA Medicaid expansions influence access and use of mental health services, along with the remaining barriers to mental health care, remains a key research priority.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Appendix SA1: Author Matrix.

Table S1. Coefficients and Marginal Effects on Medicaid Eligibility from Both Parts of Two-Part Models.