

Expedited Medicaid Enrollment, Service Use, and Recidivism at 36 Months Among Released Prisoners With Severe Mental Illness

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Objective: This study examined long-term outcomes (at 36 months) from Washington State's policy of expediting Medicaid enrollment for prison releasees with severe mental illness and compares them with previously reported short-term outcomes (at 12 months).

Methods: Linked administrative data on prison releasees (2006–2007) were analyzed by using a quasi-experimental design comparing those referred to expedited Medicaid (N=895) with a control group of those not referred (N=2,189). Aggregate outcomes were analyzed with inverse probability of treatment-weighted logit models.

Results: Expedited Medicaid had a sustained effect on both increased months of enrollment ($p<.01$) and increased use of community mental health and general medical services ($p<.01$) 36 months after prison release. However, expedited Medicaid did not reduce criminal recidivism, consistent with 12-month findings.

Conclusions: Outcome results at 12 months were sustained at 36 months—namely, expedited Medicaid for released prisoners with severe mental illness improved enrollment and service use with no effects on criminal recidivism.

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The United States has the largest prison population in the world, with over 2.2 million people incarcerated in prisons and jails in 2014 (1). Estimates of the percentage of inmates who have a severe mental illness range from 8% to 20% of the prison population (1,2). Not only are those with severe mental illness disproportionately represented in the criminal justice system, they are also more likely to reoffend than prisoners without severe mental illness (3). Because Medicaid is the single largest payer for mental health services for those with severe mental illness (2,4), enrollment upon release is crucial for access to care, but most individuals lose their Medicaid benefits during incarceration and thus are not enrolled in Medicaid when they are released (5).

In 2006, Washington State began a program to expedite enrollment in Medicaid prior to release from prison for persons with severe mental illness, which is discussed in detail elsewhere (6). Our previous research on persons released from prison with severe mental illness compared those referred to expedited Medicaid with those not referred and found that expediting increased Medicaid enrollment and use of mental health services but had no effect on criminal recidivism over a 12-month follow-up period (7). We speculated that the absence of a recidivism effect might be attributable to insufficient time for treatment to have an

effect. To assess this delayed-effects hypothesis, we extended the follow-up period of our previous research from 12 to 36 months after release from prison to examine longer-term outcomes for Medicaid enrollment, mental health care service use, and criminal recidivism.

METHODS

We used the same linked administrative data from Washington State agencies as in our prior work (6,7). We extended the person-specific file to encompass 36-month follow-up data derived from Medicaid, the Department of Social and Health Services (general medical and mental health service use), and Department of Corrections. We also used the same quasi-experimental design to compare prisoners with severe mental illness released in 2006–2007 who were referred for expedited Medicaid (N=895) with released prisoners with severe mental illness who were not referred for expedited Medicaid (N=2,189).

Because of concerns about referral selection bias, we used inverse probability of treatment weights (IPTW) (propensity scores) to balance treatment and comparison groups on 50 baseline observable factors reflecting prior criminal justice contacts, use of mental health services and medication,

TABLE 1. Outcomes at 12 and 36 months among Washington State prisoners released with severe mental illness and referred or not referred (control) to expedited Medicaid

Outcome and follow-up	Unweighted mean in expedited group (N=895)		Unweighted mean in control group (N=2,189)		Average effect of expedited Medicaid from propensity score analysis (percentage points)
	N	%	N	%	
Medicaid enrollment					
By 12 months	723	81	942	43	30.1**
By 36 months	794	89	1,347	62	22.0**
Use of community services					
Any use of outpatient general medical care					
By 12 months	574	64	917	42	16.2**
By 36 months	713	80	1,411	65	10.9**
Any emergency department use					
By 12 months	488	55	771	35	14.9**
By 36 months	613	69	1,215	56	10.3**
Any use of inpatient general medical care					
By 12 months	105	12	190	9	1.6
By 36 months	212	24	400	18	3.6
Any use of outpatient mental health treatment					
By 12 months	618	69	809	37	26.2**
Between 13 and 24 months	454	51	742	34	13.2**
Between 25 and 36 months	378	42	673	31	7.6**
Over 36 months (cumulative)	721	81	1,235	56	19.9**
Criminal justice contacts					
Any arrests					
By 12 months	531	59	1,190	54	4.1
By 36 months	653	73	1,603	73	-.0003
Any Department of Corrections days					
By 12 months	495	55	1,008	46	6.3**
Between 13 and 24 months	411	46	815	37	6.5**
Between 25 and 36 months	280	31	573	26	4.0*

* $p < .05$, ** $p < .01$

and other factors. Data were analyzed at the person level with IPTW generalized linear models with a logit link for a series of binary outcomes, which included the use of a variety of public programs and services during a 36-month postrelease follow-up period. Specifically, we examined the use of outpatient mental health care, general medical care, emergency department services, and inpatient general medical use. We also examined outcomes on criminal recidivism. We looked at outcomes at 12 months, between 13 and 24 months, between 25 and 36 months, and cumulatively over 36 months to investigate whether there was a lagged effect of expedited Medicaid.

As reported previously, except for the use of state psychiatric hospital inpatient services, use of general medical services is detected only through enrollment in public programs, such as Medicaid, or service provision by government agencies or facilities; thus service use may be confounded with Medicaid participation. As a result, these measures are robust from a government payer perspective but may underestimate service use supported by private providers and charity.

The research was conducted with the approval of institutional review boards at the Washington State Department of

Social and Health Services and the University of North Carolina at Chapel Hill.

RESULTS

By 36 months postrelease, 89% of those referred for expedited Medicaid enrollment were enrolled in Medicaid, whereas only 62% of the comparison group were enrolled, with an adjusted between-group difference of 22.0 percentage points ($p < .01$) (Table 1). This difference was approximately 8 percentage points lower than the difference in enrollment at 12 months, suggesting that over time, although Medicaid enrollment increased in the control group, the expedited group still maintained a wide enrollment advantage.

Consistent with our prior findings at 12 months following release, the expedited group had higher rates of community mental health service use at 36 months ($p < .01$). The rate of outpatient mental health treatment over 36 months (cumulative) was almost 20 percentage points

higher in the expedited group, but the rate trended down from the 12-month outcomes, when it was 26 percentage points higher in the expedited group ($p < .01$). Importantly, from 12 to 36 months postrelease, both groups had substantially declining treatment rates, measured in annual increments; however, treatment rates declined faster from 12 to 36 months in the expedited group than in the comparison group (from 69% to 42% in the expedited group versus from 37% to 31% in the comparison group).

The adjusted rate of use of outpatient general medical care was nearly 11 percentage points higher in the expedited Medicaid group than in the comparison group at 36 months, a decrease from a 16-percentage point difference between groups at 12 months postrelease ($p < .01$). The adjusted rate of emergency department use was 10 percentage points higher in the expedited group at 36 months postrelease, whereas at the 12-month follow-up, the adjusted difference was nearly 15 percentage points ($p < .01$). Consistent with 12-month findings, no significant difference in use of inpatient general medical care was observed between groups at 36 months.

At 36 months, cumulative arrest rates were the same (73%) for both expedited and control groups, a no-difference

finding first observed at 12 months. This result was similar in magnitude and significance when we examined the subgroup of prison stays at 36 months that were for technical violations rather than for new crimes (data not reported). In contrast, the expedited group had a higher rate of Department of Corrections days than the control group at 12 months (55% versus 46%, $p < .01$), 24 months (46% versus 37%, $p < .01$), and 36 months (31% versus 26%, $p < .05$). The adjusted between-group differences remained consistent and significant in the 4%–6% range at each follow-up point, although the risk of incarceration declined for both groups by about 43% over the 36-month period.

DISCUSSION

The effect of the expedited Medicaid program on enrollment in Medicaid and use of community health services from 12 to 36 months for released prisoners with severe mental illness remained large and significant. This finding suggests that rapid enrollment in the Medicaid program upon release led to long-term, sustained increases in insurance coverage and in the amount of community services utilized. However, the effect of expedited Medicaid on Medicaid enrollment narrowed from 12 to 36 months, because of the comparison group's proportionately larger gains in Medicaid enrollment during this period through efforts unrelated to the expedited Medicaid policy. Despite this narrowing effect, expedited Medicaid had long-lasting and significant positive effects. This sustained effect over three years is striking given that the reduction in un-insurance between the groups as a result of the expedited Medicaid intervention occurred in the first three months postrelease.

As might be expected, the rapid enrollment in Medicaid among offenders in the expedited Medicaid program was associated with a larger difference in use of mental health services in the first year postrelease, with a declining difference in the following two years. The declining differences were almost entirely in the intervention group, whose use of mental health services dropped from 69% in year 1 to 42% in year 3, while use by the comparison group stayed relatively constant over this period, with about a third of enrollees using mental health services. These rates seem low for both groups, given the diagnosis of severe mental illness, especially because most individuals in both the treatment and the comparison groups had Medicaid coverage.

Uncontrolled selection bias may have continued to have an impact on the effects on Medicaid coverage and health service use; perhaps those identified for expedited Medicaid were sicker and had more externalizing symptoms. However, given the large number of control variables from the preincarceration period included in the analyses, this seems unlikely. Furthermore, the higher rate of use of the emergency department in the expedited group is consistent with results found in the Oregon Health Insurance Experiment, in which random assignment to Medicaid coverage led to a

statistically significant increase in the number of emergency department visits over an 18-month period (8).

Criminal recidivism outcomes at 36 months were similar to the previous findings at 12 months postrelease (7). Both groups experienced high rearrest rates, reaching 73% cumulatively at 36 months, with no significant difference between the expedited and comparison groups. The second indicator of recidivism, Department of Corrections days, showed a higher rate for the expedited group than for the control group at 12 months, a finding that mirrors results previously reported. However, the new insight from this 36-month analysis is that this difference persisted in each of the following two years, albeit at a decreasing rate. In other words, individuals in the expedited group were not arrested any more often than those in the control group, but those in the expedited group spent more time on average in prison each year after arrest compared with those in the control group. This is an unexpected finding that runs counter to our lagged-effects hypothesis that use of general medical and behavioral health treatment would decrease the risk of incarceration over time. In contrast, an earlier analysis by Washington State, and one of the few other empirical studies to address this relationship, found that chemical dependency treatment use by low-income adults was associated with a decrease in the risk of arrest (9). However, that analysis focused on a different, community-based, higher-functioning sample than the prison releasees with severe mental illness considered in this study.

Clearly, further research is required to determine the underlying causes of prolonged prison stays for individuals referred for expedited Medicaid. It is likely that Medicaid alone is only part of the solution to high rates of arrest and incarceration of persons with severe mental illness. Interventions that address housing, employment, social relationships, substance abuse, and mental health functioning are also needed to reduce recidivism (10–12). Moreover, several cognitive-behavioral interventions are now being used or adapted for justice-involved persons with mental illness, and these interventions address the criminogenic risk factors associated with justice involvement more directly than does Medicaid (13,14).

As with our earlier analyses, some limitations must be considered when interpreting these results. This study used data solely from Washington State, and findings may not be generalizable to states with different Medicaid programs, varying populations with severe mental illness, and dissimilar prison populations. The data may have omitted risk factors for criminal justice and other outcomes that are correlated with expedited treatment, despite the use of a large group of baseline covariates. Information about community health service use was generated through use of administrative data from government payer programs, and thus it did not reflect use of services in the nonpublic sector, although prior research has shown that privately funded health service use in a population with severe mental illness is low (6,7). In addition, because we used administrative data

to measure community-based health care service use, this measure may be confounded with our measure of Medicaid coverage for some outcomes.

CONCLUSIONS

Consistent with our 12-month findings, expediting Medicaid on release from incarceration significantly increased use of mental health and general medical services but did not reduce criminal recidivism among released prisoners with severe mental illness during a 36-month follow-up period.

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