

Identifying Young Adults at Risk of Medicaid Enrollment Lapses After Inpatient Mental Health Treatment

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Objective: This study sought to describe Medicaid disenrollment rates and risk factors among young adults after discharge from inpatient psychiatric treatment. **Methods:** The sample included 1,176 Medicaid-enrolled young adults ages 18 to 26 discharged from inpatient psychiatric care in a mid-Atlantic state. Medicaid disenrollment in the 365 days postdischarge and disenrollment predictors from the 180-day predischARGE period (antecedent period) were identified from administrative records. Classification and regression tree and probit regression analysis were used. **Results:** Thirty-two percent were disenrolled from Medicaid within a year of discharge. Both analytical approaches converged on four main risk factors: being in the Medicaid enrollment category for persons with a nondisabled low-income parent or for a child in a low-income household, being age 18 or 20 at discharge, having a Medicaid enrollment gap in the antecedent period, and having no primary care utilization in the antecedent period. For the 48% of the sample continuously enrolled in the antecedent period who were in the enrollment categories for disabled adults or foster care children, the disenrollment rate was 13%. **Conclusions:** A substantial minority of Medicaid-enrolled young adults discharged from inpatient care were disenrolled from Medicaid within a year. About half the sample had a low disenrollment risk, but the other half was at substantial risk. Risk factors largely reflected legal status changes that occur among these transition-age youths. Identifying inpatients at high risk of disenrollment and ensuring continuous coverage should improve access to needed postdischarge supports. Regular primary care visits may also help reduce unintended Medicaid disenrollment in this population. (*Psychiatric Services* 65:461–468, 2014; doi: 10.1176/appi.ps.201300199)

Individuals maturing from adolescence to adulthood, referred to as young or emerging adults (1) or transition-age youths (2), undergo

rapid legal and social status changes. Health care coverage is essential for young adults with chronic illnesses (1,3), especially those with serious

mental health conditions, who often need a broad array of mental health, substance abuse, and medical treatments and rehabilitation services (4). However, in 2008 in the United States, 8.7 million persons ages 19 to 29 (19%) were uninsured and another 4.6 million (10%) were enrolled in Medicaid (5). Medicaid enrollment increases access to services and improves self-assessed somatic and mental health (6). Moreover, in contrast to many private insurers, Medicaid often covers the rehabilitative and supportive services that young adults with mental illness need, such as educational and employment supports (7). However, many low-income, young adults with serious mental health conditions are at risk of disruptions in Medicaid coverage.

Medicaid is offered principally to individuals made vulnerable by having low income or disability (5,8,9). Children predominate in Medicaid populations as a consequence of preferential eligibility under federal law (9). However, among Medicaid-covered individuals who are approaching legal adulthood, coverage is frequently withdrawn or reduced after a redetermination process at age 18 (9,10). Among Medicaid-enrolled 16-year-old mental health services users, disenrollment was shown to increase sharply at ages 18 and 19, with about half of females and two-thirds of males experiencing at least six months of disenrollment by age 19 (11). In addition, some states require age-based changes in enrollment categories at age 21 (for example, foster care coverage [12]). Moreover, gaps in insurance

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coverage (public or private) significantly diminish access to needed health care (13,14).

This study examined predictors of Medicaid disenrollment among young adults (ages 18 to 26) during the first year after discharge from inpatient mental health care. Information on disenrollment risk factors could be used to design enrollment supports for vulnerable young adults. The post-discharge year is a period of elevated suicide risk (15,16), and the risk is elevated further by discontinuity in outpatient care (17). Continuous Medicaid coverage may be an important prerequisite for timely postdischarge follow-up care, which research suggests reduces readmission risk (18). We hypothesized that the likelihood of disenrollment would be greater at ages associated with Medicaid eligibility changes (11), among males (11,19), among individuals not enrolled through a Medicaid disability category (11,19), among those with less serious psychiatric morbidity (11), and among those without recent connection to primary care or outpatient mental health services. We also expected that use of primary care and outpatient mental health clinic services would be correlated with continued enrollment in Medicaid because such safety-net providers—for example, federally qualified health centers—are adept at and often required by law to help clients enroll in Medicaid when they are eligible (20,21). Finally, we hypothesized that “near poor” individuals (22) (that is, individuals with incomes just above the poverty line) would be at increased disenrollment risk because even small income increases would render them ineligible for Medicaid (23).

Methods

Sample and variables

Administrative data from the Maryland Medicaid program and public mental health system were used to construct an individual-level database for all 1,177 Medicaid-enrolled persons who were ages 18 to 26 on discharge from an inpatient mental health stay between October 2005 and September 2006. For individuals with multiple admissions, only the first admission was used. One individual who was flagged as a qualified Medicare beneficiary (that

is, limited Medicare and Medicaid coverage) was dropped, leaving 1,176 in the sample. The study was declared exempt from institutional review board review by the Maryland Department of Health and Mental Hygiene and the University of Maryland School of Medicine.

The dependent variable for this investigation was the occurrence of any days during which the person was not enrolled in Medicaid during the 365 days after discharge from the index inpatient admission. A one-year follow-up period was chosen because this interval represents heightened risk for suicide and hospital readmission (15,16,18,24).

Independent variables are listed in Table 1 and included demographic characteristics (age, race-ethnicity, gender, and urban-suburban versus rural residence), Medicaid eligibility category (25), and higher versus lower income. Several additional independent variables were obtained from antecedent records (the antecedent period was defined as the 180 days before the inpatient discharge) and included psychiatric morbidity (psychiatric diagnosis, co-occurring substance use diagnosis, and number of inpatient days), primary care and outpatient mental health care utilization, other medical service utilization (defined as in previous studies [26,27]), pregnancy, and Medicaid disenrollment.

Statistical analysis

Three statistical approaches were used to characterize the relationship between postdischarge disenrollment and the independent variables. First, bivariate statistical tests (chi square or *t* tests) were used to compare all variables by disenrollment group (disenrolled versus not disenrolled). Second, classification and regression tree (CART) analysis, using SPSS, version 21, was conducted to display population subgroups and their relative risks of disenrollment. CART analysis creates statistically distinct subgroups based on sequential, hierarchical splits in the population that yield the strongest between-subgroup differences in regard to a selected outcome (28–30). This tree-growing method maximizes within-group homogeneity, and splits in the data were found based on

squared probabilities of membership in each outcome category (using the Gini calculation) with a minimum change improvement of .0001. Only splits that produced final groups of at least 50 individuals were considered. The CART analysis provides a graphic that is useful for contrasting the relative risk of disenrollment between subgroups, but it does not yield point estimates that simultaneously adjust for all variables in the model.

The third approach was a probit regression analysis for the probability of disenrollment. Probit regression is similar to logistic regression but is based on the normal probability distribution and yields estimates that can be interpreted as changes in probability (rather than logistic regression odds ratios) (31). In addition to all the independent variables described above, this regression included an indicator for ages 18 or 20 at discharge, because eligibility for Medicaid under “child” coverage categories in Maryland often ends by ages 19 and 21 (25). For sensitivity analyses, probit regressions were reestimated with a disenrollment gap definition of ≥ 30 days. In addition, probit models were estimated without the limited-coverage group (composed largely of pregnant or postpartum women, which thus was correlated with the pregnancy status variable). Differences were considered significant if *p* values were $\leq .05$.

Results

Characteristics of the overall sample and disenrollment groups are presented in Table 2. The disenrollment rate in the 365-day postdischarge period was 32%.

Unadjusted comparisons

Bivariate unadjusted comparisons indicated significant differences between individuals who were continuously enrolled and those who were disenrolled (Table 2). Disenrolled persons were more likely to be ages 18 or 20, to have a higher income, and to have had fewer inpatient psychiatric days. Those continuously enrolled were more likely to have a recent pregnancy and outpatient mental health or primary care visits in the antecedent period. Medicaid enrollment categories and mental health diagnoses were also differentially

distributed among those continuously and discontinuously enrolled.

Regression tree results

Figure 1 summarizes the CART analysis results. The first and thus the most differentiating split was by enrollment category, indicating that the greatest difference in disenrollment rate was between the group that included individuals in the Medicaid category for families and children and individuals enrolled in the State Children's Health Insurance Program (SCHIP) (F&C/SCHIP) (57% disenrolled) and the other enrollment categories (20% disenrolled). The absence of subsequent splits between the disabled, foster care, or limited-coverage Medicaid enrollment categories suggests that they were equivalent in regard to disenrollment risk. The CART analysis revealed a low-risk group (13% disenrollment): individuals who were not in the F&C/SCHIP category and who also did not have a disenrollment in the antecedent period. This low-disenrollment group was large (N=567, 48% of the sample) but contained only 18% of those who were disenrolled in the 365-day post-discharge period. By contrast, in the remaining sample (N=609), 51% were disenrolled. The highest disenrollment rate (83%) was observed for individuals in the F&C/SCHIP category who were between the ages of 20.1 and 22.7 and who had no primary care utilization in the antecedent period. This group accounted for only 7% of the sample. All other subgroups identified by the CART analysis experienced disenrollment at variously elevated rates (range 40%–71% disenrollment).

The CART analysis successfully classified 74% of the sample into the two categories (disenrolled or not), but successful classification of disenrollment occurred for only 38% of disenrolled cases.

Probit regression results

Table 2 also shows results of probit regression analyses of disenrollment. Marginal effects (df/dx) are reported for the probit analysis. Each marginal effect is the estimated change in the probability of disenrollment given a change in the value of a covariate, holding all other covariates constant at their sample mean values. For

Table 1

Independent variables used in an analysis of Medicaid lapses among 1,176 young adults^a

Independent variable	Description
Demographic characteristic	
Age	Age at discharge
Race	Reported in administrative record
Gender	Reported in administrative record
Urban-suburban versus rural residence	Based on zip code of residence at discharge
Higher income ^b	Family income at baseline >116% of the federal poverty level (FPL) or families with savings. Measured as being in a Medicaid eligibility category that includes families with incomes from 116% to 185% of the FPL (for example, children under age 19 or pregnant women) or in a "spend down" category in which families are required to use savings before becoming eligible for Medicaid
Medicaid eligibility category at discharge	
Disabled	Based on state or federal standards. Individuals in this category have higher overall morbidity than those in other eligibility categories.
Foster care	Custodial care provided by the state
Families and children or State Children's Health Insurance Program	Based on family income and participant's minor status
Limited coverage	Coverage is limited in duration or extent: pregnancy or postpartum, pharmacy assistance or primary care only, or noncitizens
Measured in antecedent period ^c	
Psychiatric diagnosis	Based on the 5 most frequent diagnoses (ICD-9 codes) in the individual's Medicaid claims ^d
Schizophrenia spectrum disorder	ICD-9 codes 295.1–295.4 and 295.6–295.9
Bipolar disorder	ICD-9 codes 296.0X, 296.4X–296.9X, absent a schizophrenia spectrum diagnosis
Depressive disorder	ICD-9 codes 296.2X–296.3X, 311.XX, absent a schizophrenia spectrum or bipolar disorder diagnosis
Other mental illness	ICD-9 codes 290, 293–4, 297–302, 306–319, absent a schizophrenia spectrum, bipolar, or depressive disorder diagnosis
Substance use disorder (not tobacco)	ICD-9 codes 303.XX–305.XX, excluding 305.1 (tobacco use disorder)
Pregnancy ^b	Based on HEDIS, ICD-9, or procedure codes in the individual's record
Medicaid disenrollment ^b	≥1 days without Medicaid coverage per enrollment span records
Outpatient mental health service use ^b	Service for which the primary diagnosis was a psychiatric diagnosis (ICD-9 codes 290–302 and 306–319) and received in a standard outpatient mental health treatment venue (excluding emergency department, specialized day hospital, or psychiatric rehabilitation clinic)
Primary care visit ^b	Per definitions to isolate "well visits" and other primary care encounters ^e
Inpatient general medical stay ^b	Not connected to a primary psychiatric diagnosis (excluding ICD-9 codes 290–302, and 306–319)
Emergency department visit ^b	Per Uniform Bill revenue codes (045X or 0981) ^f

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Table 1*Continued from previous page*

Independent variable	Description
Total N of psychiatric inpatient days	Includes index hospitalization and all other inpatient days in the 180 days before the index hospitalization discharge for which the ICD-9 code for the primary diagnosis was 290–303 or 306–319

^a Variables were generated by algorithmic review of Medicaid claims, enrollment records, and demographic files for periods noted.

^b A binary variable coded as 1, presence of the event, or 0, absence

^c 180 days before the discharge from the index hospitalization

^d When the five most frequent diagnoses fell into more than one category, the individual was assigned to the category associated with the greatest morbidity, in the following order: schizophrenia, bipolar disorder, depressive disorder, and other mental illness.

^e Definitions used in previous studies (26,27)

^f Adapted from Healthcare Effectiveness Data and Information Set (HEDIS) definitions of ambulatory care visits (26)

continuously valued covariates, df/dx corresponds to the change in disenrollment probability given that the covariate increases by 1 (for example, a one-year increase in age). For dichotomous covariates with values of 0 or 1, df/dx represents the difference in disenrollment probabilities for individuals with a value of 1 compared with individuals with a value of 0 (that is, the reference group). Results of both analyses were consistent with the CART results. The pseudo- R^2 calculations indicated that the probit model accounted for 20% of the variance in the enrollment outcome (32). Of the ten variables that were significantly different between the enrolled and disenrolled groups in the bivariate analysis, seven were significantly different in the probit analysis; group differences in age (years), diagnoses, and outpatient mental health utilization did not reach significance in the probit analysis. Similar to the CART analysis, being in the F&C/SCHIP category predicted disenrollment: those in the F&C/SCHIP category were 37.6% more likely to be disenrolled than those not in this enrollment category (95% confidence interval [CI]=30.2%–44.9%). Also similar to the CART analysis, use of primary care in the antecedent period was associated with an 11.3% lower likelihood of postdischarge disenrollment (CI=17.9%–4.7%).

Probit sensitivity analyses

Sensitivity analyses (data not shown) largely agreed with results presented

in Table 2. Removing the limited-coverage group (N=90) resulted in the following changes to disenrollment risk relative to the probit analysis results in Table 2: increased disenrollment risk was greater for higher income (increasing from 13% to 25%, CI=12%–38%) and for emergency department use in the antecedent period, which became significant (from 4% to 8%, CI=1%–15%) and lower for pregnancy, which became nonsignificant (from 15% to 9%, CI=–21% to 1%). Using a longer definition of disenrollment (≥ 30 days) replicated in magnitude and significance six of the seven significant effects listed in Table 2 (inpatient days became nonsignificant). Medicaid enrollment in the limited-coverage group, Hispanic race, and male gender were also significant correlates in the analysis that used a longer disenrollment period, suggesting that each variable had a stronger association with longer enrollment gaps than with shorter gaps. Longer disenrollment occurred for 28% of the sample.

Discussion

This study used two distinct statistical methods, which considered all independent variables hierarchically (CART analysis) or simultaneously (probit analysis), to quantify individual-level correlates of future Medicaid disenrollment among young adults who were discharged from a psychiatric inpatient stay. In the sample, 32% experienced disruptions in Medicaid

coverage in the year after discharge. This finding alone supports concerns about the adequacy of health care coverage during this interval of heightened risk for suicide and hospital readmission (15,16,18,24).

Although the disenrollment rate in this sample is comparable to disenrollment rates observed in general populations of child and adult Medicaid enrollees (33), a relatively lower disenrollment rate was expected because of the multiple clinical vulnerabilities of these young adults. However, contrary to expectations, these young adults were not protected from disruptions in health care coverage. Moreover, young adults have been found to be less likely than any other age group to have private insurance (34), suggesting that in the critical time after inpatient mental health treatment, many individuals in the sample may have had poorer access to outpatient mental health treatment than other child or adult Medicaid enrollees.

Generally, our findings confirm five of the hypothesized risk factors. Support from both the CART and probit analyses confirmed that being “non-disabled” (that is, being enrolled in the F&C/SCHIP category), being at an age at which eligibility changes (18 or 20 years old), and not having a recent connection to primary care were each correlated with disenrollment. Probit analysis also indicated greater enrollment continuity among those with greater psychiatric morbidity (that is, more inpatient days) and less continuity with relatively high incomes. Less support was found for the effect of gender or for use of outpatient mental health services in the antecedent period.

Our findings indicate that the single strongest Medicaid disenrollment risk factor was being in the F&C/SCHIP category; most of the young adults (57%) in this category were subsequently disenrolled. To qualify for this enrollment category in this age group, most would either be a parent in a low-income family or a “child” in a low-income family. This state allows “children” in low-income families to remain covered by Medicaid up to age 21 if they remain a member of their parents’ (or other guardian’s) household. Thus some would lose eligibility

Table 2

Characteristics of 1,176 Medicaid-enrolled young adults discharged from inpatient psychiatric care, by continuity of enrollment in the 365 days postdischarge

Variable	Bivariate analyses										
	Total sample (N=1,176)		Continuously enrolled (N=797)		Disenrolled (N=379)		Test statistic	df	p	Probit multiple regression ^a	
	N	%	N	%	N	%				df/dx ^b	95% CI
Baseline											
Male	478	49	408	50	190	51	$\chi^2=.12$	1	.73	.057	-.008 to .120
Age 18 or 20	300	26	169	21	131	35	$\chi^2=24$	1	<.001	.130**	.045 to .220
Age (M±SD)	22.1±2.3		22.2±2.3		21.9±2.3		t=2.1	1,174	.04	.015	<-.001 to .030
Race (reference: white)							$\chi^2=5.8$	4	.21		
White	540	46	364	46	176	46					
Black	574	47	378	47	169	45				.009	-.055 to .073
Hispanic	31	2.6	16	2.0	15	3.9				.150	-.047 to .330
Other	18	1.5	<11 ^c	<2 ^c	<11 ^c	<3 ^c				.220	-.033 to .470
Unknown	40	3.4	29	3.6	11	2.9				-.002	-.170 to .160
Higher income	145	12	77	9.7	68	18	$\chi^2=16$	1	<.001	.130*	.021 to .240
Urban or suburban residence	973	83	670	84	303	80	$\chi^2=3.0$	1	.081	-.015	-.092 to .063
Diagnosis (reference: other mental illness) ^d							$\chi^2=25$	3	<.001		
Schizophrenia	307	26	236	30	71	19				-.006	-.097 to .086
Bipolar	342	29	240	30	102	27				.016	-.065 to .097
Depressive disorder	238	20	150	19	88	23				.027	-.058 to .110
Other mental illness	289	25	171	21	118	31					
Substance use disorder	116	9.9	83	10	33	8.7	$\chi^2=.84$	1	.36	-.036	-.130 to .055
Recent pregnancy	135	11	107	13	28	7.4	$\chi^2=9.2$	1	.002	-.150**	-.230 to -.058
Enrollment category (reference: disabled) ^d							$\chi^2=162$	3	<.001		
Families and children or SCHIP	382	32	165	21	217	57				.380***	.300 to .450
Disabled	646	55	514	64	132	35					
Foster care	58	4.9	53	6.7	5	1.3				-.092	-.240 to .057
Limited coverage	90	7.7	65	8.2	25	6.6				.073	-.077 to .220
Antecedent period											
Disenrollment	354	30	176	22	178	47	$\chi^2=76$	1	<.001	.170***	.093 to .240
Outpatient mental health visit	977	83	699	88	278	73	$\chi^2=38$	1	<.001	-.073	-.160 to .011
Primary care visit	499	42	390	49	109	29	$\chi^2=43$	1	<.001	-.110**	-.180 to -.047
Inpatient general medical stay	176	15	126	16	50	13	$\chi^2=1.4$	1	.24	-.011	-.095 to .073
Emergency department visit	486	41	340	43	146	39	$\chi^2=1.8$	1	.18	.043	-.022 to .110
Inpatient psychiatric days (M±SD) ^e	7.9±11		8.7±13		6.1±6.9		t=3.7	1,174	<.001	-.004*	-.007 to <-.001

^a Log-likelihood=-595, $\chi^2=293$, pseudo- $R^2=.20$, N=1,176, df=23

^b Incremental change in disenrollment risk for each incremental change in the listed variable

^c Upper bound given to protect individual patient confidentiality

^d Mutually exclusive categories (yes-no binary indicator)

^e Includes index hospitalization

*p<.05, **p<.01, ***p<.001

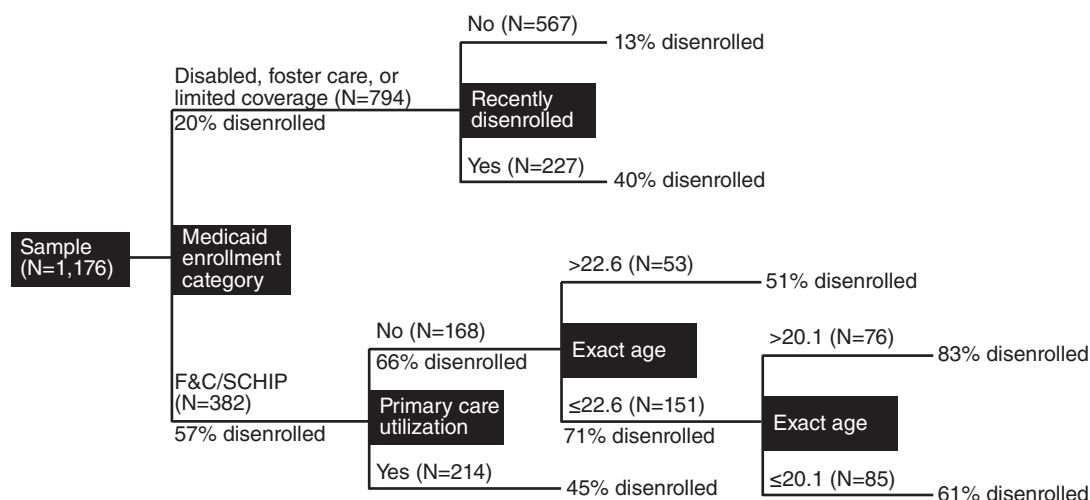
by turning 18 when they have left the qualifying household, and others could remain covered until their 21st birthday if they remain in the household. The high risk for those at age 18

and 20 suggests a strong contribution of these age-defined boundaries to disenrollment. Both analyses also converged on the importance of prior disenrollment as a risk factor for

subsequent disenrollment. This finding suggests that being admitted for inpatient mental health treatment does not necessarily reduce future risk of disenrollment among young

Figure 1

Classification and regression tree analysis of Medicaid disenrollment rates among subgroups of young adults in the 365 days after discharge from a psychiatric hospitalization^a



^a F&C/SCHIP, in Medicaid category for families and children or in the State Children's Health Insurance Program (SCHIP)

adults whose enrollment in Medicaid had been inconsistent. Having either of these two characteristics (being in the F&C/SCHIP or having an enrollment gap in the antecedent period) was associated with a 51% rate of disenrollment in the postdischarge period; approximately half the population had either of these two characteristics.

Primary care utilization in the antecedent period emerged as a factor protecting individuals from disenrollment. Primary care providers may observe the individual's risk of coverage loss and may facilitate applications for continuation. Others have observed directly or commented about the importance of primary care, including holistic care, to help persons with serious mental illness address the other health issues they typically face (19,35–38).

The finding of lowered risk of disenrollment in the disabled and foster care groups and among individuals with more inpatient psychiatric days confirms that even within our clinically at-risk group, the most vulnerable individuals were less likely to be disenrolled. The surprisingly low disenrollment among foster care youths despite their "aging out" status, which was also reported by Pullmann and colleagues (11), may be accounted for by Medicaid extensions through age 20 for those who are disabled, pregnant, parents, or medically needy (39). For individuals

in these particularly vulnerable subpopulations, case workers may undertake additional efforts to prevent disenrollment.

Pregnancy in the antecedent period also reduced disenrollment risk, consistent with previous findings in this age group (11) and for adults in general (20). Moreover, probit coefficients for pregnancy in the antecedent period were only slightly attenuated when the limited-coverage group was removed from the analysis. Pregnancy is a qualifying condition for limited coverage, and the limited-coverage group in this sample included 58 of the 135 pregnant women. Accordingly, it seems that any pregnancy, even if it was not the nominal Medicaid-qualifying event, resulted in more stable Medicaid enrollment. This finding suggests that new mothers or expectant women are easier to maintain in Medicaid than others, even though pregnancy-related eligibility often "expires" 60 days postpartum (25). Continued Medicaid enrollment may be supported through women's own motivation to keep their infant and themselves covered or if they qualify as a low-income family when infant care can make earning income challenging.

The association of higher family income with greater disenrollment suggests "temporary" eligibility that results when slight fluctuations in income or age lead to disenrollment (23).

Overall, the findings of this study are similar to those found by Pullmann and colleagues (11), who examined Medicaid disenrollment patterns across 7.5 years for a Mississippi Medicaid cohort of 16-year-olds with mental health service utilization. These authors also found reduced disenrollment among individuals who were enrolled through disability or foster care or who were pregnant and substantial disenrollment at ages associated with enrollment eligibility changes and among those enrolled because of low family income. Generally, the direction of the effect of other variables measured in our study and in the study by Pullman and colleagues (male gender and schizophrenia diagnosis) was similar, but it was weaker in our study. Overall, the similarity of findings is striking given the shorter duration of disenrollment and follow-up in our study and the opposite state rankings of per capita income in the two samples (in the 2007 U.S. Census, Maryland ranked fifth and Mississippi 50th).

These findings suggest that Medicaid disenrollment after an inpatient stay might be prevented by identifying young adults who are at greatest risk of disenrollment and offering them enrollment supports. Such supports would involve assistance with Medicaid reenrollment or with obtaining alternative coverage and would presumably

be offered by the state Medicaid office or the public mental health authority. Given the brevity of inpatient mental health treatment and the many competing priorities before discharge, assessing disenrollment risk should happen as quickly as possible, with linkage to supports that can advocate for health care coverage and help the individual negotiate for coverage.

Beginning in 2014, implementation of Medicaid expansions and insurance exchange plans under the 2010 Affordable Care Act might be expected to reduce the risk of Medicaid disenrollment among young adults. Many states are putting in place administrative processes intended to simplify health care plan enrollment (40,41). Examples of these processes include using a single unified application for both Medicaid and exchange plans and designing exchange plans specifically for youths under age 21. In addition, states can make childless adults with incomes up to 133% of the federal poverty level eligible for Medicaid, at state option, with a much higher federal match than for other populations and make persons who have been uninsured for more than six months potentially eligible for federally subsidized, high-risk, state insurance plans that provide coverage for individuals with preexisting conditions.

However, there are also reasons to be skeptical of the potential effectiveness of such reforms, at least for young adults with substantial psychiatric morbidity. Each step toward preventing disenrollment or obtaining alternative health care coverage requires individuals to engage in the application process, which may be a substantial barrier for this group. Indeed, studies of health care reform in Massachusetts have found increased enrollment for young adults in Medicaid and through health care exchanges (42,43) but worse enrollment among adults with behavioral health problems (44).

Several limitations should be noted. This sample comprised young adults in a single state's Medicaid program, and the results may not generalize accurately to populations in other states, to other age groups, or to populations with different service utilization histories. In addition, the Medicaid enrollment data did not

provide any information about receipt of care under private or other insurance coverage among those who disenrolled from Medicaid. However, evidence suggests that the likelihood of maintaining continuous health insurance coverage may have been quite low for these young adults, who were from low-income backgrounds and had serious mental health problems (34). Statistical models explained only a portion of the variability in Medicaid disenrollment, with most of the variability left unexplained. Factors such as disenrollment due to imprisonment (young adulthood is the peak age for imprisonment among males) and failure to reapply, which were not captured by this database, may also have been important.

Conclusions

This study provides evidence that gaps in Medicaid coverage among young adults in the year after an inpatient psychiatric discharge are related to being eligible for Medicaid because of low income, recent discontinuities in Medicaid enrollment, age associated with eligibility changes, and recent absence of primary care visits. In addition, having household income closer to the upper bound of Medicaid eligibility increased the risk of future Medicaid disenrollment, and pregnancy was only transiently protective against disenrollment.

Although implementation of the 2010 Affordable Care Act will offer various pathways for young adults to maintain their health care coverage, achieving this continuity may still be challenging for many because of their relative inexperience coupled with their psychiatric symptoms. In the absence of evidence demonstrating that the 2010 Affordable Care Act eliminates coverage disruptions in this vulnerable population, the feasibility and effectiveness of formal supports to increase continuity of coverage for needed mental health services should be examined.

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