HHS Public Access

Author manuscript

Psychiatr Serv. Author manuscript; available in PMC 2021 January 01.

Published in final edited form as:

Psychiatr Serv. 2020 January 01; 71(1): 4–11. doi:10.1176/appi.ps.201900179.

The Association of Expanded Medicaid Coverage with Health and Job-Related Outcomes among Enrollees with Behavioral Health Disorders

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Abstract

Objectives: The study objective was to assess the impact of Medicaid expansion on health and employment outcomes among enrollees with and without mental health or substance use diagnoses (a.k.a. behavioral health disorders).

Methods: We conducted a telephone survey of 4,090 Michigan Medicaid expansion enrollees (January-October 2016) and identified respondents with potential behavioral health diagnoses using claims-based diagnoses (48.3% of respondents).

Results: Enrollees with behavioral health diagnoses were less likely than enrollees without behavioral health diagnoses to be employed, but significantly more likely to report improvements in health and ability to do a better job at work. In adjusted analyses, both behavioral health diagnosis and non-behavioral health diagnosis enrollees who reported improved health were more

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Previous presentation

This work has not been presented previously.

likely than enrollees without improved health to report that Medicaid expansion coverage helped them do a better job at work and made them better able to look for a job. Compared to non-behavioral health diagnosis enrollees, behavioral health diagnosis enrollees with improved health were similarly likely to report improved ability to work and job seeking after Medicaid expansion.

Conclusions: Coverage interruptions for enrollees with behavioral health diagnoses should be minimized to maintain favorable health and employment outcomes.

On January 11, 2018, the Centers for Medicare & Medicaid Services (CMS) announced a historic shift in its policy to promote work or "community engagement" requirements for Medicaid beneficiaries as a condition of eligibility (1). Under this policy, individuals can be required to work, go to school, or volunteer for at least 20 hours per week to qualify for Medicaid coverage (2). Since January 2018, CMS has granted Section 1115 waivers to nine states – Arizona, Arkansas, Indiana, Kentucky, Maine, Michigan, New Hampshire, Ohio and Wisconsin – to allow state-specific modifications to implement work requirements in their Medicaid programs (3). As many as 22 million of the 28 million adults (nearly 80%) with Medicaid coverage nationally could be affected by work requirements (4).

Individuals with behavioral health conditions, such as mental health or substance use disorders, comprise a large proportion of the Medicaid population, and may be particularly vulnerable to health risks, should they experience coverage loss associated with a work requirement (6, 7). Such individuals have greater baseline health and employment challenges (8, 9). For example, people with depression and anxiety have a greater likelihood of unemployment, absences from work, and lower productivity at work, compared with individuals without these conditions (8–11). Furthermore, similar to those with other chronic conditions (e.g., asthma, rheumatoid arthritis), people with mental health or substance use disorders (behavioral health disorders) often have fluctuating impairments in their functioning – some days they may be able to work a full-time job, and other days they may not be able to leave the house (12).

Obtaining Medicaid coverage may allow individuals to improve their health and, thus, their ability to work and maintain employment (13). However, health and job-related outcomes may be more difficult to achieve for enrollees with behavioral health diagnoses compared to enrollees with other chronic conditions. It is uncertain whether coverage can facilitate improvements in health and job-related outcomes for individuals with behavioral health conditions, who often have greater baseline challenges in health and employment.

We focused our study on examining the current effects of expanded Medicaid coverage on health and job-related outcomes of enrollees with behavioral health diagnoses. In 2014, Michigan expanded its Medicaid program under a Section 1115 waiver program, which is providing coverage to approximately 670,000 low-income adults as of February 2019. In our prior work, we found that, among the general Medicaid expansion population in Michigan, enrollees who reported improvements in physical and mental health were more likely to report improvements in ability to work and seek employment (13). In the present study, we sought to assess the impact of Michigan's Medicaid expansion program ("Healthy Michigan Plan", HMP) on health and employment outcomes of enrollees with and without behavioral health diagnoses.

Methods

Study Design

We conducted a telephone survey of 4,090 HMP enrollees (January to October 2016), approximately two years after HMP implementation in April 2014. The survey was part of an evaluation of the HMP under contract with the Michigan Department of Health and Human Services (MDHHS). The study was deemed exempt and informed consent waived by the University of Michigan and MDHHS Institutional Review Boards, as a federally-mandated evaluation of a public program. We have previously described the survey methods elsewhere (13, 14). Briefly, we included enrollees aged 19–64, with HMP enrollment ≥12 months prior to sampling and ≥9 months in a HMP managed care plan, preferred language of English, Spanish or Arabic, and a complete Michigan address and phone number in the MDHHS Medicaid claims data warehouse in the study. We used sampling stratified by income and geographic region, and conducted telephone interviews with enrollees in English, Arabic and Spanish, which lasted approximately one hour.

The study sample included 4,108 HMP enrollees (weighted N = 379,627) who completed the survey. We excluded from analysis 18 surveys with >20% missing data, leaving 4,090 respondents with fully completed surveys (weighted response rate = 53.7% using the American Association for Public Opinion Research's response rate formula) (15). Compared to respondents, non-respondents were more likely to be younger, male, or have a Detroit residence. We applied nonresponse adjustment to sampling weights, controlling for age, gender, race/ethnicity, enrollment month, sampling strata, sampling month, and the interaction between sampling strata and sampling month (16). Further, we controlled for any discrepancy between the sample and the population through an iterative proportional fitting method on age, gender, race/ethnicity, enrollment month and sampling strata (17).

Identification of Survey Respondents with Behavioral Health Diagnoses

We identified enrollee respondents with potential diagnoses of behavioral health disorders by searching Medicaid administrative claims in the 24-month period prior to survey sampling. The behavioral health diagnosis group was defined as having at least one claims diagnosis from the Mental and Behavioral Disorders Value Set from the 2016 Healthcare Effectiveness Data and Information Set (HEDIS); we excluded tobacco use disorder from the eligible list. We used this method of identifying any individual with ≥1 behavioral health claims diagnosis to identify enrollee respondents with potential behavioral health diagnoses. This method yielded 2,040 enrollee respondents (48.3% of all survey respondents) as having a potential behavioral health diagnosis. We note that behavioral health diagnoses that appear in claims (treated prevalence) differs from actual prevalence of behavioral health conditions.

Measures

We examined both health and job-related outcomes in the study.

Health outcomes—We asked about perceived changes in health status through the following items: 1) "Overall, since you enrolled in the Healthy Michigan Plan, would you say your physical health has gotten better, stayed the same or gotten worse?"; and 2)

"Overall, since you enrolled in the Healthy Michigan Plan, would you say your mental and emotional health has gotten better, stayed the same, or gotten worse?" [dichotomizing "better" vs. all other responses].

Job-related outcomes—We first assessed current employment status [employed or self-employed, out of work, homemaker, student, retired, unable to work]. For respondents who were working, we asked about perceived changes in ability to work through the following items: 1) "In the past 12 months, about how many days did you miss work because of illness or injury (do not include maternity leave)?"; 2) "Compared to the 12 months before this time, was this more, less or about the same?"; and 3) "Has getting health insurance through the Healthy Michigan Plan helped you do a better job at work?" [response options of "Yes" and "No"].

We also asked about perceived changes in job seeking by assessing agreement with the following statements: 1) "Having health insurance through the Healthy Michigan Plan has made me better able to look for a job" (among those not working); and 2) "Having health insurance through the Healthy Michigan Plan helped me get a better job" (among those with a recent job change but currently working) [dichotomizing strongly agree/agree vs. neutral/disagree/strongly disagree responses].

The survey also included standard measures of demographic characteristics, health status, insurance status, health care access and utilization from established national surveys (18–22). Covariates included age, gender, race, income, self-reported health status, presence of any chronic health condition, and functional limitation.

Statistical Analysis

We used descriptive statistics to report individual survey responses and χ^2 testing for categorical variables and *t* test for continuous variables in bivariate analyses that assessed differences between enrollees with and without behavioral health diagnoses. For each group of enrollees, we used multivariable logistic regression analysis to assess the association between reported health improvements and job-related outcomes, adjusting for the covariates noted above. To assess whether enrollees with and without behavioral health diagnoses differed in the association between health improvement and job-related outcomes in multivariable analyses, we conducted additional analyses including an interaction term between an indicator variable for behavioral health diagnosis group and health improvement. We weighted all analyses to account for sampling and nonresponse using Stata version 14.2. We considered two-sided alpha values less than 0.05 statistically significant.

Results

Respondent Demographic, Health and Employment Characteristics

Half of survey respondents (48.3%) had ≥1 Medicaid claims behavioral health diagnosis (Table 1). Enrollees with behavioral health diagnoses were more likely than those without to have lower incomes (57.4% vs. 46.6% with incomes 0–35% of the federal poverty level, $P<0.001$). The behavioral health diagnosis group also had greater prevalence of having 1 or more chronic health conditions (84.3% vs. 55.1%, $P<0.001$) and fair/poor health status

(39.8% vs. 20.3%, $P<0.001$) than those without behavioral health diagnoses. Enrollees with behavioral health diagnoses were more likely than enrollees without behavioral health diagnoses to report that their physical and mental health were not good in the 30 days preceding the survey ($P<0.001$).

With regard to employment, 43.3% of enrollees with behavioral health diagnoses were employed or self-employed, compared with 54.0% of enrollees without behavioral health diagnoses ($P<0.001$). Nearly one in five (18.3%) of enrollees with behavioral health diagnoses reported they were unable to work, compared with 4.6% of enrollees without behavioral health diagnoses ($P<0.001$).

Changes in Health since Enrollment

Although both groups reported health improvements since HMP enrollment, enrollees with behavioral health diagnoses were more likely than enrollees without to report improvements in their physical health (51.2% vs. 44.6%; $P<0.001$) and mental or emotional health (45.0% vs. 31.8%, $P<0.001$).

Reported Employment and Ability to Work

Enrollees with behavioral health diagnoses were less likely than enrollees without behavioral health diagnoses to be employed at the time of the survey (43.3% vs. 54.0%, $P<0.001$; Table 2). Among employed enrollees, those with behavioral health diagnoses were more likely than those without behavioral health diagnoses to have missed work days (10.7 vs. 5.6 days, $P<0.001$), but also more likely than enrollees without behavioral health diagnoses to report that enrollment in HMP helped them to do a better job at work (76.4% vs. 64.1%, $P<0.001$).

Changes in Job-seeking since Enrollment

Of the respondents who were out of work, those with and without behavioral health diagnoses were equally likely to strongly agree or agree that enrollment in HMP made them better able to look for a job (55.8% of enrollees with behavioral health diagnoses, 53.2% of enrollees without behavioral health diagnoses, $P=0.49$). Similarly, of the respondents who had a recent job change, those with and without behavioral health diagnoses were equally likely to report that HMP had helped them get a better job (40.0% vs. 34.3%, $P=0.34$).

Adjusted Associations between Health Improvements and Job-related Outcomes for Enrollees

In adjusted multivariable analyses, for both enrollees with behavioral health diagnoses (adjusted odds ratio [aOR]=1.11, 95% CI=0.83–1.48) and those without behavioral health diagnoses (aOR=1.03, 95% CI=0.80–1.34), physical or mental health improvement since HMP enrollment was not associated with current employment (Table 3). However, both behavioral health diagnosis and non-behavioral health diagnosis enrollees who reported improved health were more likely than enrollees without improved health to report that Medicaid expansion coverage helped them do a better job at work (aOR for behavioral health diagnosis group=5.62, 95% CI=3.68–8.59; aOR for non-behavioral health diagnosis group=3.27, 95% CI=2.33–4.60), made them better able to look for a job (aOR for behavioral health diagnosis group=2.71, 95% CI=1.61–4.59; aOR for non- behavioral health

diagnosis group=3.16, 95% CI=1.78–5.61), and for those with a recent job change, helped them get a better job (aOR for behavioral health diagnosis group=5.38, 95% CI=2.24–12.94; aOR for non- behavioral health diagnosis group=2.65, 95% CI=1.23–5.69).

When comparing changes in job-related outcomes between enrollees with and without behavioral health diagnoses, behavioral health diagnosis enrollees with improved health were similarly likely as non- behavioral health diagnosis enrollees to report improved ability to work, job seeking, and current employment (Table 3, footnote).

Discussion

In this survey of Medicaid expansion enrollees with and without claims-based behavioral health diagnoses in Michigan, we found that enrollees with a behavioral health diagnosis were more likely than enrollees without a behavioral health diagnosis to have chronic conditions, poor health and lower incomes. However, enrollees with behavioral health diagnoses were also more likely to report improvements in physical and mental health, and to report improvements in their ability to work. Compared to those without behavioral health diagnoses, enrollees with behavioral health diagnoses were also similarly likely to demonstrate an association between improved health and ability to work, as well as job seeking. Overall, among enrollees with behavioral health diagnoses, Medicaid expansion appears to be more effective at improving health and at least equally as effective at improving job-related outcomes as it is among enrollees without behavioral health diagnoses.

Nationally, the Affordable Care Act’s (ACA) Medicaid expansion was projected to increase access to and receipt of behavioral health treatment (23). People with behavioral health disorders reported gains in insurance coverage and access to care after the ACA (24). For substance use disorder (SUD) in particular, people with Medicaid were twice as likely as those with private insurance or no insurance to have received treatment services, including outpatient and inpatient services and medication-assisted treatment, in 2016 (25). Although prior studies have found that unmet behavioral health care needs were associated with lower likelihood of working status (26), other studies of treatment interventions that reduce behavioral health symptom burden found modest associated improvements in work productivity and labor supply (27–29).

Nationally, enrollees with behavioral health conditions are disproportionately represented in Medicaid expansion populations and may have stood to gain more from Medicaid expansion because they started with greater challenges in accessing health care (30), experiencing good health (30, 31), and maintaining employment at baseline (8–10). In addition, Olesen and colleagues have suggested a reciprocal relationship between mental health and employment, as poor mental health was identified as both a consequence and a risk factor for unemployment in their longitudinal population-level study of working-age adults in Australia (11). Improved access to treatment associated with Medicaid coverage may set a positive cascade in motion, where good mental health, recovery from a substance use disorder or improvements in overall health facilitates employment, which further improves mental health and sobriety.

This study should be interpreted within the context of its potential limitations. First, claims-based identification of behavioral health diagnoses may differ from self-report or medical records, and from actual prevalence of these conditions. However, administrative data has been shown to have satisfactory concordance with medical record diagnoses of behavioral health conditions (32, 33). Second, our method of selecting enrollees with ≥1 behavioral health claims diagnosis in a 24-month period is intended to identify those with potential behavioral health diagnoses, but not to confirm diagnosis. This is a more sensitive than specific method for identifying behavioral health diagnoses and could bias our findings comparing behavioral health diagnosis enrollees to non-behavioral health diagnosis enrollees toward the null. Our selection method also selects for a heterogeneous group, with no differentiation between individuals with serious or persistent mental illness and individuals with mild or moderate behavioral health conditions, which could overestimate the number of people with behavioral health needs. We also did not distinguish between enrollees with mental health and substance use disorder diagnoses who may have different health care needs and different treatment resources from one another; we also are not able to distinguish which enrollees in our study may have co-occurring mental health and substance use disorders. Third, self-reported outcomes may be limited by recall bias and social desirability bias. However, unless such bias differs between those with and without behavioral health diagnoses, our conclusions about differences between the two groups should hold. Our self-reported outcomes are also limited to specific groups: for example, we only asked respondents about their ability to work if they were employed. Fourth, we do not have survey data from prior to Medicaid expansion implementation in 2014. Job-related outcomes may have differed between enrollees with and without behavioral health diagnoses at baseline. In addition, since individuals with behavioral health diagnoses are more likely to have worse health and employment at baseline, they may be more likely to report improvements in these outcomes compared with individuals without behavioral health diagnoses. Fifth, this was a cross-sectional study among Medicaid enrollees conducted after Medicaid expansion, which limits inferences about causality. Lastly, the study was conducted in one Medicaid expansion state, and experiences of enrollees may vary in states with different program features.

Conclusions

In summary, we found that enrollees with behavioral health diagnoses reported significant improvements in health and job-related outcomes associated with Medicaid expansion coverage – and that this coverage appeared equally effective for improving job-related outcomes among enrollees with and without behavioral health diagnoses. For low-income people with behavioral health conditions, treatment and recovery services may only be accessible through Medicaid coverage. However, this key group may be at particular risk of coverage loss under Medicaid work requirements due to baseline difficulty navigating the job market and potential challenges with administrative documentation requirements. Our findings suggest that Medicaid coverage itself may improve employment outcomes, and that coverage interruptions for enrollees with behavioral health diagnoses should be minimized to maintain favorable health and employment outcomes.

Disclosures and acknowledgments

The authors report no financial relationships with commercial interests. The University of Michigan is conducting the evaluation required by the Centers for Medicare and Medicaid Services (CMS) under contract with the Michigan Department of Health and Human Services (MDHHS). Data collected for this paper was funded by MDHHS and CMS for the purposes of the evaluation but does not represent the official views of either agency.

Dr. Tipirneni is supported by the K08AG056591 Clinical Scientist Development Award from the National Institute on Aging.

REFERENCES

1. Neale B Letter to state Medicaid directors: opportunities to promote work and community engagement among Medicaid beneficiaries. Baltimore MD: Centers for Medicare and Medicaid Services; 2018 https://www.medicaid.gov/federal-policy-guidance/downloads/smd18002.pdf
2. Ayanian JZ, Tipirneni R, Goold SD: Mitigating the Risks of Medicaid Work Requirements. N Engl J Med 2018; 379:803–5 [PubMed: 30088966]
3. The Henry J. Kaiser Family Foundation. Medicaid Waiver Tracker: Approved and Pending Section 1115 Waivers by State. 2018; https://www.kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state/. Accessed [2018 Dec 20].
4. Ku L, Brantley E: in Medicaid Work Requirements: Who's At Risk?: Health Affairs Blog
5. National Association of State Health Policy. State Proposals for Medicaid Work and Community Engagement Requirement. 2018; https://nashp.org/wp-content/uploads/2018/01/Medicaid-Work-Requirements-Chart_4_5_18_Final.pdf. Accessed [July 20, 2017].
6. Zur J, Musumeci M, Garfield R. Medicaid's Role in Financing Behavioral Health Services for Low-Income Individuals. 2017; https://www.kff.org/medicaid/issue-brief/medicaids-role-in-financing-behavioral-health-services-for-low-income-individuals/. Accessed [July 20, 2017].
7. Frank RG, Glied SA: Work Requirements in Medicaid for People With Mental Illnesses and Substance Use Disorders. Psychiatr Serv 2018; 69:626–7 [PubMed: 29649937]
8. Lerner D, Henke RM: What does research tell us about depression, job performance, and work productivity? J Occup Environ Med 2008; 50:401–10 [PubMed: 18404013]
9. Hoffman DL, Dukes EM, Wittchen HU: Human and economic burden of generalized anxiety disorder. Depress Anxiety 2008; 25:72–90 [PubMed: 17146763]
10. Adler DA, McLaughlin TJ, Rogers WH, et al.: Job performance deficits due to depression. Am J Psychiatry 2006; 163:1569–76 [PubMed: 16946182]
11. Olesen SC, Butterworth P, Leach LS, et al.: Mental health affects future employment as job loss affects mental health: findings from a longitudinal population study. BMC Psychiatry 2013; 13:144 [PubMed: 23705753]
12. Danziger S, Frank RG, Meara E: Mental illness, work, and income support programs. Am J Psychiatry 2009; 166:398–404 [PubMed: 19339364]
13. Tipirneni R, Kullgren JT, Ayanian JZ, et al.: Changes in Health and Ability to Work Among Medicaid Expansion Enrollees: a Mixed Methods Study. J Gen Intern Med 2019; 34:272–80 [PubMed: 30519839]
14. Moniz MH, Kirch MA, Solway E, et al.: Association of Access to Family Planning Services With Medicaid Expansion Among Female Enrollees in Michigan. JAMA Netw Open 2018; 1:e181627 [PubMed: 30646135]
15. American Association for Public Opinion Research. Standard definitions: Final dispositions of case codes and outcome rates for surveys. 2016; http://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf. Accessed [July 20, 2017].
16. Lee S, Valliant R: Weighting telephone samples using propensity scores; in Advances in Telephone Survey Methodology. Edited by Lepkowski J, Tucker C, Brick J, et al. John Wiley & Sons, 2007
17. Deville JC, Sarndal CE, Sautory O: Generalized Raking Procedures in Survey Sampling. J Am Stat Assoc 1993; 88:1013–20

18. Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Questionnaire. 2017; https://wwwn.cdc.gov/nchs/nhanes/Default.aspx. Accessed [2017 Sept 4].
19. Center for Studying Health System Change. Health Tracking Household Survey (HTHS), 2007 [United States]. 2011; https://www.icpsr.umich.edu/icpsrweb/HMCA/studies/26001/version/1. Accessed [2017 Sept 4].
20. Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS). National Health Interview Survey (NHIS). 2017; https://www.cdc.gov/nchs/nhis/nhis_questionnaires.htm. Accessed [2017 Sept 4].
21. Agency for Healthcare Research and Quality (AHRQ). Consumer Assessment of Healthcare Providers and Systems (CAHPS). 2017; https://www.ahrq.gov/cahps/surveys-guidance/index.html. Accessed [2017 Sept 4].
22. U.S. Census Bureau. American Community Survey (ACS). 2017; https://www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.2018.html. Accessed [2017 Sept 4].
23. Han B, Gfroerer J, Kuramoto SJ, et al.: Medicaid expansion under the Affordable Care Act: potential changes in receipt of mental health treatment among low-income nonelderly adults with serious mental illness. Am J Public Health 2015; 105:1982–9 [PubMed: 25790424]
24. Thomas KC, Shartzer A, Kurth NK, et al.: Impact of ACA health reforms for people with mental health conditions. Psychiatric Services 2017; 69:231–4 [PubMed: 29137555]
25. Zur J, Tolbert J. The Opioid Epidemic and Medicaid's Role in Facilitating Access to Treatment. 2018; https://www.kff.org/medicaid/issue-brief/the-opioid-epidemic-and-medicaids-role-in-facilitating-access-to-treatment/. Accessed [December 20, 2018].
26. Henry AD, Long-Bellil L, Zhang J, et al.: Unmet need for disability-related health care services and employment status among adults with disabilities in the Massachusetts Medicaid program. Disabil Health J 2011; 4:209–18 [PubMed: 22014668]
27. Timbie JW, Horvitz-Lennon M, Frank RG, et al.: A meta-analysis of labor supply effects of interventions for major depressive disorder. Psychiatr Serv 2006; 57:212–8 [PubMed: 16452698]
28. Wickizer TM, Campbell K, Krupski A, et al.: Employment outcomes among AFDC recipients treated for substance abuse in Washington State. Milbank Q 2000; 78:585–608 [PubMed: 11191450]
29. Dunigan R, Acevedo A, Campbell K, et al.: Engagement in outpatient substance abuse treatment and employment outcomes. J Behav Health Serv Res 2014; 41:20–36 [PubMed: 23686216]
30. The Henry J. Kaiser Family Foundation. Medicaid's Role in Behavioral Health. 2017; https://www.kff.org/infographic/medicaids-role-in-behavioral-health/. Accessed [December 20, 2018].
31. Weissman J, Russell D, Jay M, et al.: Disparities in health care utilization and functional limitations among adults with serious psychological distress, 2006–2014. Psychiatric Services 2017; 68:653–9 [PubMed: 28412896]
32. Townsend L, Walkup JT, Crystal S, et al.: A systematic review of validated methods for identifying depression using administrative data. Pharmacoepidemiol Drug Saf 2012; 21 Suppl 1:163–73 [PubMed: 22262603]
33. Hwang S, Jayadevappa R, Zee J, et al.: Concordance Between Clinical Diagnosis and Medicare Claims of Depression Among Older Primary Care Patients. Am J Geriatr Psychiatry 2015; 23:726–34 [PubMed: 25256215]

Highlights

- Enrollees with a behavioral health diagnosis were more likely than enrollees without a behavioral health diagnosis to have poor health and lower incomes, and less likely to be employed. However, enrollees with a behavioral health diagnosis were more likely to report improvements in health and ability to do a better job at work after Medicaid expansion.
- Both behavioral health diagnosis and non-behavioral health diagnosis enrollees who reported improved health were more likely than enrollees without improved health to report that Medicaid expansion coverage helped them do a better job at work and made them better able to look for a job.
- Overall, among enrollees with behavioral health diagnoses, Medicaid expansion appears to be at least equally as effective at improving job-related outcomes as it is among enrollees without behavioral health diagnoses.

Table 1 –

Demographic Characteristics of Survey Respondents by the Presence of a Behavioral Health Diagnosis, 2016

Demographic characteristics	Behavioral health diagnosis, Weighted % or mean N=2,034	95% CI	No behavioral health diagnosis, Weighted % or mean N=2,056	95% CI	Total, Weighted % or mean N=4,090	95% CI	*P*[*]
All respondents	48.3	46.4–50.3	51.7	49.7–53.6			
Age							.001
19–34 (n= 1,303)	37.3	34.6–40.2	42.4	39.6–45.3	40.0	38.0–42.0	
35–50 (n= 1,301)	37.5	34.9–40.3	30.7	28.1–33.4	34.0	32.1–35.9	
51–64 (n= 1,486)	25.1	23.1–27.3	26.9	24.8–29.1	26.0	24.5–27.6	
Gender							.017
Male (n= 1,681)	46.0	43.2–48.7	50.8	48.0–53.5	48.4	46.5–50.4	
Female (n= 2,409)	54.0	51.3–56.8	49.2	46.5–52.0	51.6	49.6–53.5	
Race							< .001
White (n= 2,784)	68.2	65.5–70.7	54.7	51.9–57.4	61.2	59.3–63.0	
Black or African American (n= 807)	21.6	19.3–24.1	30.2	27.6–33.0	26.1	24.3–27.9	
Other (n= 306)	6.4	5.1–8.0	10.9	9.3–12.8	8.8	7.7–10.0	
More than one (n= 142)	3.8	2.8–5.0	4.2	3.2–5.5	4.0	3.3–4.9	
Hispanic/Latino (n= 188)	5.0	3.9–6.4	5.4	4.3–6.9	5.2	4.4–6.2	.51
Arab, Chaldean, Middle Eastern (n= 204)	3.4	2.4–4.7	8.8	7.3–10.5	6.2	5.3–7.2	<.001
Marital status[a,b]							<.001
Married (n= 1,008)	17.0	15.2–18.9	23.5	21.5–25.7	20.4	19.0–21.8	
Partnered (n= 185)	4.4	3.5–5.5	4.2	3.2–5.4	4.3	3.6–5.1	
Divorced (n= 865)	20.8	18.8–23.0	15.7	13.9–17.6	18.2	16.8–19.6	
Widowed (n= 147)	3.1	2.3–4.1	2.5	1.9–3.3	2.8	2.3–3.4	
Separated (n= 119)	3.3	2.5–4.3	2.3	1.6–3.3	2.8	2.3–3.4	
Never married (n= 1,745)	51.5	48.7–54.2	51.7	48.9–54.4	51.6	49.6–53.5	
FPL category							< .001
0–35 % (n= 1,600)	57.4	55.3–59.5	46.6	44.3–48.9	51.8	50.8–52.8	
36–99 % (n= 1,450)	25.5	23.8–27.3	31.1	29.3–33.0	28.4	27.6–29.3	
≥ 100 % (n= 1,040)	17.1	15.7–18.5	22.3	20.7–23.9	19.8	19.1–20.4	

Demographic characteristics	Behavioral health diagnosis, Weighted % or mean N=2,034	95% CI	No behavioral health diagnosis, Weighted % or mean N=2,056	95% CI	Total, Weighted % or mean N=4,090	95% CI	*P**
Urbanicity							< .001
Urban (n= 2,892)	78.5	76.7–80.2	83.4	81.8–84.9	81.0	80.0–82.0	
Suburban (n= 400)	9.8	8.5–11.3	7.8	6.6–9.1	8.8	7.9–9.7	
Rural (n= 798)	11.7	10.6–12.8	8.8	7.9–9.7	10.2	9.7–10.7	
Any chronic health condition present (n=2,986)	84.3	82.0–86.3	55.1	52.2–57.9	69.2	67.3–71.0	<.001
Health status[a]							< .001
Excellent (n= 337)	5.5	4.4–6.9	13.2	11.4–15.4	9.5	8.4–10.8	
Very good (n= 1,041)	18.8	16.6–21.2	34.3	31.6–37.1	26.8	25.0–28.7	
Good (n= 1,448)	35.7	33.1–38.3	32.1	29.6–34.7	33.8	32.0–35.7	
Fair (n= 931)	27.9	25.5–30.4	16.9	15.0–19.0	22.2	20.7–23.8	
Poor (n= 324)	11.9	10.2–13.8	3.4	2.6–4.5	7.5	6.6–8.6	
How many days in the past 30 days was your physical health not good?[c]	9.49	SD=11.7	5.01	SD=9.2	7.24	SD=10.8	<.001
How many days in the past 30 days was your mental health not good?[d]	8.79	SD=11.4	2.90	SD=7.2	5.82	SD=10.0	<.001
Any insurance pre-HMP (n=1,667)	40.2	37.5–43.0	41.1	38.4–43.9	40.7	38.8–42.6	.24

Note. CI = confidence interval; FPL = Federal Poverty Level; SD = standard deviation

[a]Analysis included a “Don’t know” group which has been omitted from the table (<1% of respondents)

[b]*P* value generated from $\chi 2$ analyses that included all categories of marital status, including married, partnered, divorced, widowed, separated, and never married

[c]Behavioral health diagnosis group, n= 2,006; No behavioral health diagnosis group, n= 2,027. Values reported are mean (95% CI) number of days.

[d]Behavioral health diagnosis group, n= 1,983; No behavioral health diagnosis, n= 2,019. Values reported are mean (95% CI) number of days.

[*]*P* values compare between behavioral health diagnosis group and non-behavioral health diagnosis group. $\chi 2$ test was used for categorical variables and *t* test was used for continuous variables.

Table 2 –

Health and Job-related Outcomes of Michigan Medicaid Expansion Enrollees, by the Presence of a Behavioral Health Diagnosis, 2016

Job outcomes	Behavioral health diagnosis, Weighted % or mean N=2,034	95% CI	No behavioral health diagnosis, Weighted % or mean N=2,056	95% CI	Total, Weighted % or mean N=4,090	95% CI	*P*[*]
Employment status[a,b]							<.001
Employed or self-employed (n=2,079)	43.3	40.6–46.0	54.0	51.3–56.8	48.8	47.0–50.7	
Out of work ≥ 1 yr. (n=707)	19.9	17.8–22.3	19.4	17.2–21.9	19.7	18.1–21.3	
Out of work < 1 yr. (n=258)	8.1	6.7–9.8	7.6	6.1–9.5	7.9	6.8–9.1	
Homemaker (n=217)	3.6	2.8–4.6	5.4	4.4–6.6	4.5	3.8–5.3	
Student (n=161)	4.5	3.3–6.0	5.8	4.6–7.4	5.2	4.3–6.2	
Retired (n=167)	1.9	1.4–2.6	3.0	2.4–3.9	2.5	2.1–3.0	
Unable to work (n=479)	18.3	16.3–20.5	4.6	3.6–5.9	11.3	10.1–12.5	
Missed work days due to illness or injury in past 12 months[c,d]	10.7	SD=35.7	5.6	SD=23.6	7.9	SD=29.8	< .001
Compared to 12 months before, missed work days more, less, or about the same?[a,c]							<.001
More (n= 299)	14.9	12.5–17.6	10.9	8.9–13.3	12.7	11.1–14.4	
Less (n= 384)	21.0	18.1–24.4	13.1	10.9–15.7	16.6	14.7–18.6	
About the same (n= 1,611)	61.7	57.9–65.4	74.1	70.9–77.1	68.7	66.2–71.8	
Having health insurance through HMP helped me do a better job at work[c] (n= 1,431)	76.4	72.9–79.7	64.1	60.5–67.5	69.4	66.8–71.8	< .001
Having health insurance through HMP has made me better able to look for a job[e]							.49
Strongly agree (n= 158)	17.4	13.7–21.8	15.0	11.5–19.5	16.2	13.5–19.3	
Agree (n= 389)	38.4	33.5–43.6	38.2	32.7–44.1	38.3	34.6–42.2	
Neutral (n= 185)	19.6	15.5–24.3	19.0	14.4–24.7	19.3	16.1–22.9	
Disagree (n= 143)	14.5	11.1–18.9	19.7	14.8–25.7	17.2	14.0–20.8	
Strongly disagree (n= 35)	4.5	2.7–7.5	2.6	1.4–4.6	3.5	2.4–5.2	
Don’t know (n= 47)	5.6	3.5–8.7	5.4	3.2–9.1	5.5	3.9–7.7	
Changed jobs in the last 12 months[c] (n= 447)	29.2	25.2–33.6	26.4	22.9–30.2	27.6	24.9–30.4	.42

Job outcomes	Behavioral health diagnosis, Weighted % or mean N=2,034	95% CI	No behavioral health diagnosis, Weighted % or mean N=2,056	95% CI	Total, Weighted % or mean N=4,090	95% CI	*P**
Having health insurance through HMP helped me get a better job[f]							.34
Strongly agree (n= 33)	7.9	4.1–14.7	7.5	4.2–13.0	7.7	5.0–11.6	
Agree (n= 123)	32.1	24.1–41.3	26.8	19.5–35.5	29.2	23.6–35.4	
Neutral (n= 103)	20.0	14.3–27.4	22.7	16.5–30.4	21.5	17.1–26.7	
Disagree (n= 150)	28.6	21.2–37.3	37.6	29.6–46.2	33.5	27.8–39.6	
Strongly disagree (n= 30)	9.2	5.4–15.4	4.0	2.1–7.6	6.4	4.2–9.6	
Don't know (n= 8)	2.1	0.9–5.2	1.5	0.3–6.1	1.8	0.8–4.0	
Health outcomes							
Physical health has gotten better (n= 1,961)	51.2	48.5–54.0	44.6	41.8–47.4	47.8	45.8–49.8	< .001
Mental and emotional health has gotten better (n= 1,550)	45.0	42.3–47.8	31.8	29.1–34.5	38.2	36.3–40.1	< .001

Note. CI = confidence interval; SD = standard deviation

[a]Analysis included a "Don't know" group which has been omitted from the table (<1% of respondents)

[b]*P* value generated from $\chi 2$ analyses that included all categories of employment status, including employed or self-employed, out of work ≥ 1 yr., out of work < 1 yr., homemaker, student, retired, and unable to work

[c]Analysis restricted to respondents who are employed/self-employed.

[d]Behavioral health diagnosis group, n= 1,040; No behavioral health diagnosis group, n= 1,269. Values reported are mean (95% CI) number of days.

[e]Analysis restricted to respondents who are out of work for > 1 yr., or out of work for < 1 yr.

[f]Analysis restricted to respondents who are employed/self-employed and had a job change in the last 12 months.

[*]*P* values compare between behavioral health diagnosis group and non-behavioral health diagnosis group. $\chi 2$ test was used for categorical variables and *t* test was used for continuous variables.

Table 3 –

Multivariable Association between Health Improvements and Employment Outcomes among Michigan Medicaid Expansion Enrollees with and without Behavioral Health Diagnoses, 2016

	Association of physical or mental health improvement with outcome*					
	Behavioral health diagnosis group			Non-behavioral health diagnosis group		
Job-related outcomes	**aOR**	**95% CI**	***P***	**aOR**	**95% CI**	***P***
	Ref			Ref		
Employed/Self-Employed[a]	1.11	0.83–1.48	.48	1.03	0.80–1.34	.80
	Ref			Ref		
Better job at work[b]	5.62	3.68–8.59	< .001	3.27	2.33–4.60	< .001
	Ref			Ref		
Better able to look for job[c]	2.71	1.61–4.59	< .001	3.16	1.78–5.61	< .001
	Ref			Ref		
Helped get a better job[d]	5.38	2.24–12.94	< .001	2.65	1.23–5.69	.013

Note. CI = confidence interval; aOR = Adjusted Odds Ratios. Each row and column represents a different multivariable logistic regression model, adjusted for age, gender, race, income, health status, presence of a chronic health condition, and functional limitation.

[a]Employment status was dichotomized as employed/self-employed vs. all other responses. The reference group is not employed.

[b]Employed enrollees who responded “Yes” to the question, “Has getting health insurance through the Healthy Michigan Plan helped you do a better job at work?”. The reference group is those who responded “No”.

[c]Out of work enrollees who strongly agreed or agreed that “Having health insurance through the Healthy Michigan Plan has made me better able to look for a job.” The reference group is those with neutral, disagree, or strongly disagree responses.

[d]Enrollees with a recent job change who strongly agreed or agreed that “Having health insurance through the Healthy Michigan Plan helped me get a better job.” The reference group is those with neutral, disagree, or strongly disagree responses.

*When comparing the association of physical or mental health improvement (reference group is no health improvement) with changes in job-related outcomes between behavioral health diagnosis and non-behavioral health diagnosis groups, there were no statistically significant differences for being employed/self-employed, being better able to look for a job, helping to get a better job, or doing a better job at work.