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The Impact of Substance Abuse Treatment Funding Reductions on Health Care Costs for Disabled Medicaid Adults in Washington State

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THE PAST DECADE has seen major changes in the level of funding for substance abuse treatment in Washington State. The five-year period from State Fiscal Year (SFY) 2005 to SFY 2009 saw a major expansion of substance abuse treatment funding for adults enrolled in Medicaid and the program formerly known as General Assistance. This period of expansion has been followed by two biennia of reduced funding for substance abuse treatment. Revenue shortfalls during the Great Recession led to health care funding cuts that fell disproportionately on substance abuse treatment services, driven by federal constraints that limited the State's ability to balance budget cuts across health care delivery systems while maintaining access to enhanced federal Medicaid funding. This study examines the impact of these substance abuse treatment funding reductions on medical and nursing facility costs for adults enrolled in disability-related Medicaid coverage in Washington State.

Key findings

- **The substance abuse treatment funding expansion from SFY 2005 to SFY 2009 significantly increased use of substance abuse treatment by Disabled Medicaid clients in Washington State.** Substance abuse treatment penetration—a measure of service use relative to the estimated level of need—increased more than 50 percent from SFY 2004 to SFY 2009.
- **The increase in access to substance abuse treatment in the "expansion era" coincided with a significant reduction in rates of growth in medical and long-term care costs for Disabled Medicaid clients with substance use problems.** Over the expansion era, "per member per month" (PMPM) medical costs for Disabled Medicaid clients *with* substance abuse problems grew annually by only 1.4 percent, compared to 3.8 percent annual PMPM medical cost growth for Disabled Medicaid clients *without* substance abuse problems.
- **The substance abuse treatment funding contraction that began in late SFY 2009 caused a decline in access to treatment for Disabled Medicaid clients.** The decline in access to treatment after SFY 2009 coincided with relative increases in rates of growth of medical and nursing facility costs for Disabled Medicaid clients with substance abuse problems. Over the "contraction era", medical costs for Disabled Medicaid clients with substance abuse problems *increased* annually by 4.2 percent PMPM, compared to a 2.6 percent PMPM annual *decline* in costs for Medicaid Disabled clients without substance abuse problems.

These findings demonstrate the importance of access to substance abuse treatment as a strategy for containing medical and long-term care cost growth for persons enrolled in disability-related Medicaid coverage, and point to the need for financing mechanisms that support this strategy.

Changing funding levels for substance abuse treatment

The past decade has seen major changes in the level of funding for substance abuse treatment in Washington State. The five-year period from State Fiscal Year (SFY) 2005 to SFY 2009 saw a major expansion of substance abuse treatment funding for adults enrolled in Medicaid and the program formerly known as General Assistance. Most notably, Senate Bill (SB) 5763, The Omnibus Treatment of Mental and Substance Abuse Disorders Act of 2005, provided expanded funding to the DSHS Division of Behavioral Health and Recovery (DBHR) for substance abuse treatment for adults enrolled in Medicaid and General Assistance. Treatment Expansion funding for Medicaid and General Assistance clients grew to approximately $40 million in the 2007-09 Biennium.

This period of expansion has been followed by two biennia of reduced funding for substance abuse treatment. Revenue shortfalls during the Great Recession led to health care funding cuts that fell disproportionately on substance abuse treatment services, constrained in part by federal stimulus maintenance-of-effort requirements that limited the State's ability to balance budget cuts across health care delivery systems while maintaining access to enhanced federal Medicaid funding. Table 1 shows the relative change from SFY 2009 to SFY 2012 in funding levels across the major Medicaid-funded health care delivery systems in Washington State. Substance abuse related expenditures by DBHR in SFY 2012 were 14.5 percent lower than in SFY 2009, compared to a 13.7 percent increase in medical expenditures and an 8.1 percent increase in long-term care expenditures over the period.

The overall decline in substance abuse treatment funding masks the magnitude of the disruption in treatment utilization that occurred at the client level. Figure 1 shows the monthly trend in expenditures on substance abuse treatment for adults age 18-64 enrolled in Categorically Needy (CN) Disabled Medicaid coverage over the period from July 2002 to March 2012. Expenditures are averaged over all adults enrolled in CN Disabled Medicaid coverage in the month. The chart shows the profound disruption in use of treatment services that began in June 2009 due to supplemental cuts to the SFY 2009 budget, and the ongoing lower level of utilization due to subsequent reductions in substance abuse treatment appropriations over the SFY 2010 to SFY 2012 period.

This paper focuses on the experiences of the adult CN Disabled Medicaid population because this coverage group accounts for most of the short-run health care "cost offset" opportunities associated with providing substance abuse treatment to Medicaid clients. The CN Disabled Medicaid population is a high-opportunity group due to the high level of medical risk associated with the presence of other disabling conditions, combined with a relatively high prevalence of need for substance abuse treatment. The substance abuse treatment expansion initiated by SB 5763 was funded primarily through forecast offsets in medical and nursing home costs for Disabled Medicaid adults. Savings assumptions were based on estimates from the SSI Cost Offset Study and related analyses conducted during the legislative session.[1] Statistical models comparing how costs evolve over time for treated and untreated clients with substance use problems were used to estimate the impact of treatment on medical and long-term care costs. During the "expansion era", ongoing monitoring and evaluation efforts verified that the forecast medical and nursing home cost savings were achieved.[2]

This study, as with earlier evaluations of the treatment expansion era, makes use of the "natural experiment" provided by changes over time in substance abuse treatment funding levels. We use an "intent-to-treat" design to infer the impact of changes in substance abuse treatment funding on medical and nursing home expenditures. This design compares changes in PMPM costs for CN Disabled Medicaid clients *with* substance abuse problems, relative to changes in PMPM costs for the balance of the CN Disabled Medicaid population *without* substance abuse problems who therefore were unaffected by changes in the level of funding for substance abuse treatment.

[1] Estee and Nordlund. Washington State Supplemental Security Income (SSI) Cost Offset Pilot Project: 2002 Progress Report, DSHS Research and Data Analysis Division, www1.dshs.wa.gov/rda/research/11/109.shtm.

[2] Mancuso D, Felver B. Bending the Health Care Cost Curve by Expanding Alcohol/Drug Treatment. Olympia, WA: WA State Dept. of Social and Health Services, Research and Data Analysis Division. Sept 2010.

Changing rates of access to substance abuse treatment

We assess whether changes in access to substance abuse treatment "bend the curve" in medical and nursing home costs for Disabled Medicaid adults. Figure 1 shows how substance abuse treatment penetration has varied over the 10-year period, as measured by the rate of recent service use among clients with an indication of treatment need. The numerator of the penetration rate includes all adults enrolled in CN Disabled Medicaid coverage in the month who received substance abuse treatment in the past 12 months. The denominator includes all adults in the coverage group who show evidence of a need for substance abuse treatment in administrative data within the past 24 months. Treatment need indicators are defined in the technical note on page 8. Based on the long-run trend in treatment penetration, we define the following time periods for analysis:

- The **pre-expansion era** from SFY 2003 to SFY 2004 when the substance abuse treatment penetration rate was relatively stable at 24 percent;
- The **expansion era** from SFY 2005 to SFY 2009 when the substance abuse treatment penetration rate increased by more than half from 24 percent to 37 percent; and
- The **contraction era** from SFY 2010 to SFY 2012 when the substance abuse treatment penetration rate decreased from 37 percent to 33 percent.

TABLE 1.

Change in Washington State Medicaid and Related Health Expenditures

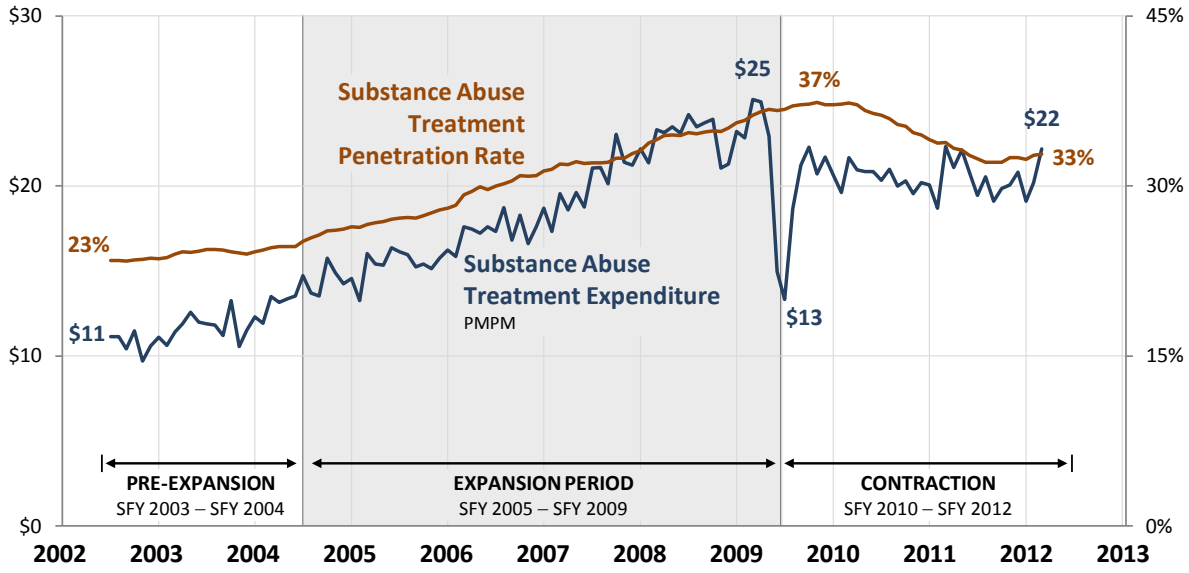
SFY 2009 to SFY 2012 • All fund sources

	Total Expenditures (Dollars in Thousands)		
Program Area	**2009**	**2012**	**% Change 2009-2012**
Mental Health (030)	792,888	773,631	– 2.4%
Developmental Disabilities (040)	937,052	937,156	0.0%
Long-Term Care (050)	1,551,289	1,676,569	8.1%
Substance Abuse (070)	**201,320**	**172,214**	**– 14.5%**
Medical Assistance (080)	4,279,256	4,863,953	13.7%
TOTAL ALL PROGRAMS	**7,761,804**	**8,423,523**	**8.5%**

FIGURE 1.

Funding Contraction Reduces Access to Treatment

PMPM Substance abuse treatment costs and penetration rate for CN Disabled Medicaid adults, SFY 2003 to SFY 2012



Increased access to substance abuse treatment reduces growth in medical costs

Figure 2 shows the trend in the 6-month moving average of PMPM medical expenditures separately for CN Disabled Medicaid adults *with* and *without* an identified need for substance abuse treatment. Figure 3 summarizes the monthly trend data into measures of the average annual change in PMPM medical costs for the two client groups across the three different policy eras. In the pre-expansion era, medical costs were growing more rapidly for adults with substance abuse problems than for those without a substance abuse problem (10.8 percent vs. 6.9 percent). During the expansion era, this pattern reversed, with medical costs growing more slowly for adults with substance abuse problems than for those without substance abuse problems (1.4 percent vs. 3.8 percent). This pattern reverted back during the contraction era, with medical costs growing more rapidly for adults with substance abuse problems (4.2 percent *increase* vs. 2.6 percent *decrease*). The relative changes in medical cost trends are driven by underlying changes in inpatient hospital costs.

FIGURE 2.

Medical Costs Increase for CN Disabled Medicaid Adults Following SA Tx Funding Contraction

PMPM medical costs for CN Disabled Medicaid adults with and without SA treatment need, 6-month moving average

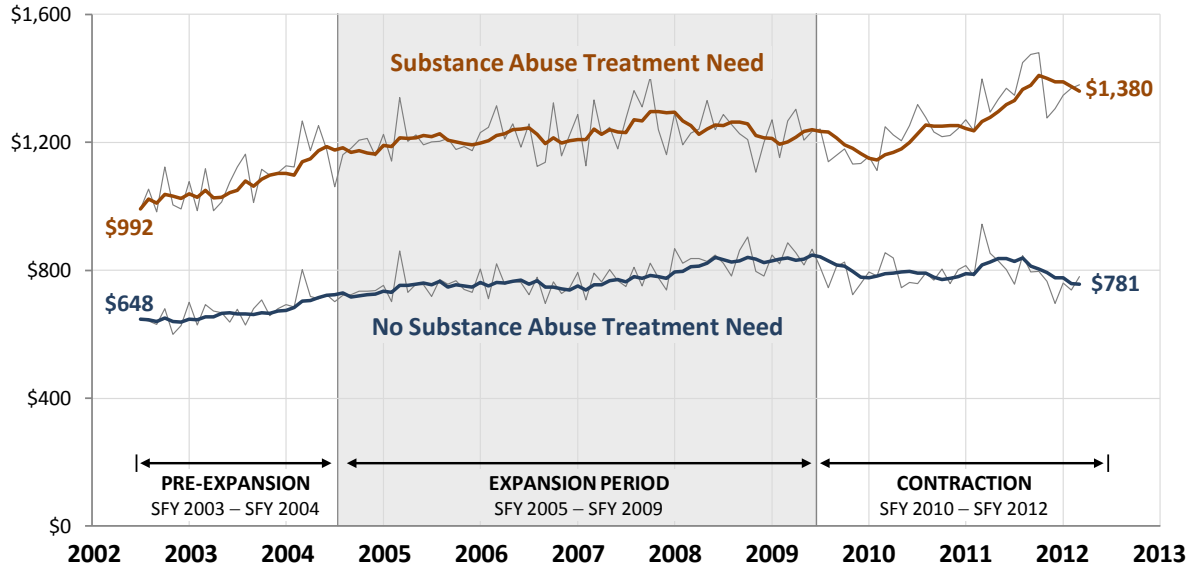
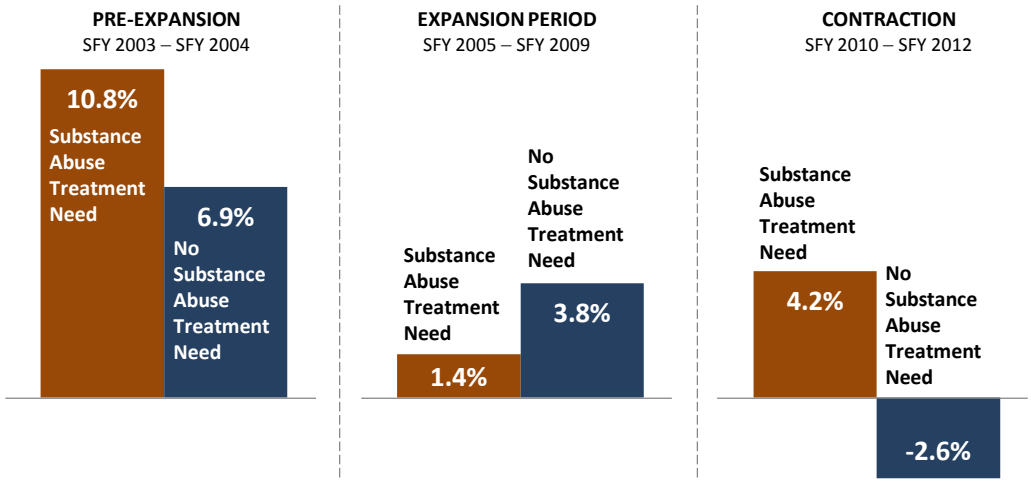


FIGURE 3.

Relative Medical Cost Growth Trends Reverse Following SA Treatment Funding Contraction

Average annual percent change in PMPM medical costs



Increased access to substance abuse treatment reduces growth in nursing home costs

Figure 4 shows the trend in the 6-month moving average of PMPM nursing home expenditures separately for CN Disabled Medicaid adults *with* and *without* an identified need for substance abuse treatment. Figure 5 summarizes the monthly trend data into measures of the average annual change in PMPM nursing home costs for the two client groups across the three different policy eras. We observe the same pattern as with medical costs. In the pre-expansion era, nursing home costs were growing more rapidly for adults with substance abuse problems than for those without an identified substance abuse problem (9.9 percent vs. 0.3 percent). During the expansion era, this pattern reversed, with nursing home costs growing more slowly for adults with substance abuse problems (1.1 percent *decrease* vs. 1.8 percent *increase*). This pattern reverted back during the contraction era, with nursing home costs growing more rapidly for adults with substance abuse problems (2.3 percent *increase* vs. 2.4 percent *decrease*).

FIGURE 4.

Nursing Home Costs Increase for CN Disabled Medicaid Adults Following SA Tx Funding Contraction

PMPM nursing home costs for CN Disabled Medicaid adults with/without SA treatment need, 6-month moving avg.

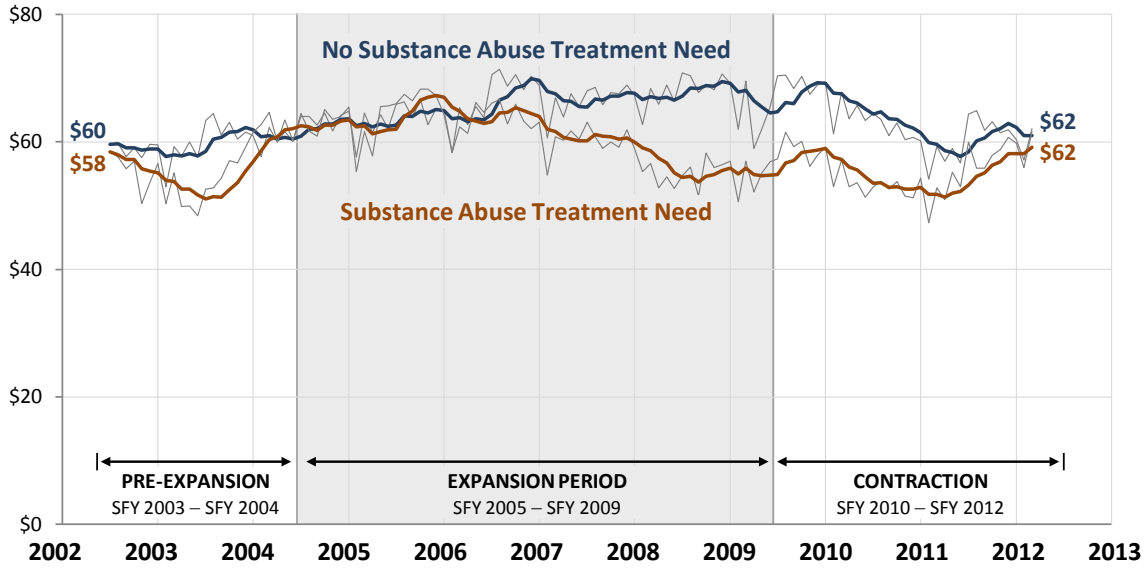
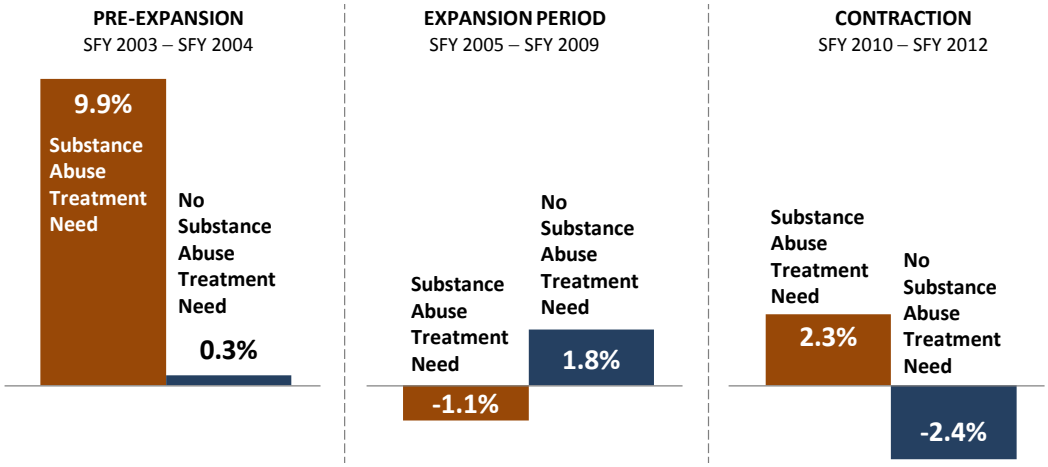


FIGURE 5.

Relative Nursing Home Cost Growth Trends Reverse Following SA Treatment Funding Contraction

Average annual percent change in PMPM nursing home costs



Substance abuse treatment funding cuts undo "expansion era" savings

To illustrate the magnitude of the reversal of medical and nursing facility cost trends for clients with substance abuse problems following the contraction in substance abuse treatment funding, we calculate the cost trends that would have occurred if clients with substance abuse problems experienced the same rate of change in PMPM medical and nursing facility costs as clients without substance abuse problems over the SFY 2010 to SFY 2012 period.

How much lower would aggregate expenditures for Disabled Medicaid clients have been under this alternative scenario? As depicted in Table 2 below, if clients with substance abuse problems had experienced the same annual percentage change in medical costs as clients without substance abuse problems over the SFY 2010 to SFY 2012 period, average annual PMPM costs would have trended from $1,155 PMPM in SFY 2010 to $1,186 PMPM in SFY 2011 and $1,129 in the first 9 months of SFY 2012. In contrast, the observed PMPM expenditure levels for Disabled Medicaid adults with substance abuse problems grew from $1,182 to $1,380 over those three years. The cumulative difference in medical expenditures between the observed level and the alternative estimate is $102.7 million over the 33-month contraction period. This "excess cost" is approximately equivalent to the medical cost savings previously estimated to have accrued during the expansion era.[3] The analogous set of calculations is performed in Table 3 below for nursing facility costs.

The purpose of these calculations is not to precisely quantify the budget impact of the substance abuse treatment funding contraction, but rather to illustrate that under plausible assumptions about the trends that could have been achieved if funding had not been reduced, the cuts to substance abuse treatment appear to have been counterproductive from a budget savings perspective.

TABLE 2.
Magnitude of Upward Trend in Medical Costs for Disabled Medicaid Adults with SA Problems
All fund sources

	Potential (Per member per month)	Actual (Per member per month)	Difference Between Actual and Potential (Per member per month)	Total Member Months	Potential Excess Cost ▼
2010	$1,155	$1,182	$27	306,185	$8.4 million
2011	$1,186	$1,285	$99	324,522	$32.0 million
2012 (9 months)	$1,129	$1,380	$251	248,449	$62.3 million
					$102.7 million

TABLE 3.
Magnitude of Upward Trend in Nursing Home Costs for Disabled Medicaid Adults with SA Problems
All fund sources

	Potential (Per member per month)	Actual (Per member per month)	Difference Between Actual and Potential (Per member per month)	Total Member Months	Potential Excess Cost ▼
2010	$55.35	$56.55	$1.21	306,185	$0.4 million
2011	$49.33	$52.43	$3.10	324,522	$1.0 million
2012 (9 months)	$50.95	$58.51	$7.56	248,449	$1.9 million
					$3.3 million

[3] Mancuso D, Felver B. Bending the Health Care Cost Curve by Expanding Alcohol/Drug Treatment. Olympia, WA: WA State Dept. of Social and Health Services, Research and Data Analysis Division. Sept 2010.

Substance abuse treatment as a health care cost-containment strategy

As predicted in the final "expansion era" evaluation report, funding reductions beginning in the 2009-11 Biennium caused substance abuse treatment penetration rates to decline in the Disabled Medicaid population, even though this population was not an explicit target for cuts in absolute treatment funding levels:


Bending the Health Care Cost Curve by Expanding Alcohol/Drug Treatment

http://publications.rda.dshs.wa.gov/1417/

Capping Treatment Expansion funding in the 2009-11 Biennium will cause [substance abuse] treatment penetration rates to decline, as funding levels fail to keep pace with caseload growth. This may cause unbudgeted increases in health care costs for Medicaid clients with substance use problems. Additional [substance abuse] treatment funding in the Security Lifeline Act will mitigate the shortfall for Disability Lifeline (GA-U) clients. However, the Act also increases emphasis on transitioning Disability Lifeline clients to Medicaid Disabled coverage, putting increasing pressure on the capped [substance abuse] Treatment Expansion funding for Medicaid Disabled clients. This problem would be fixed by funding [substance abuse] treatment through a caseload and per cap expenditure forecast process that would ensure funding keeps pace with caseload growth.[4]

Given the magnitude of the disruption of access to substance abuse treatment services depicted in Figure 1, it is not surprising to see significant adverse impacts on medical and nursing facility cost trends for Disabled Medicaid clients. These are the same types of consequences we would expect if there were comparable levels of disruption to other medically necessary treatment services in the high-risk Disabled Medicaid population. For example, similar adverse impacts would be expected if access to insulin among persons with diabetes, access to antipsychotic medications among persons with schizophrenia, or access to rescue medications among persons with asthma were reduced.

The disruption of access to treatment for Disabled Medicaid clients was even greater than anticipated in part due to the suddenness of the funding reduction. This contributed to the Disabled Medicaid population absorbing a portion of the substance abuse treatment funding reductions that had been intended for non-Medicaid low-income adults. In addition, the elimination of out-stationed chemical dependency professionals in local Community Service Offices in early 2009 may have contributed to lower rates of engagement in treatment by Disabled Medicaid adults. Similarly, the sunsetting of the Screening, Brief Intervention and Referral to Treatment (SBIRT) pilots in early 2009 may have contributed to lower rates of engagement in treatment for Disabled Medicaid adults. The SBIRT pilots operated in nine hospital emergency departments across the state, and showed positive impact on treatment engagement among Disabled Medicaid clients receiving SBIRT interventions at those facilities.[5]

Joint DSHS and Health Care Authority initiatives are currently underway that could increase access to substance abuse treatment for persons with disabilities. The agencies are establishing health home services targeted toward high-risk Medicaid and "dual" Medicare-Medicaid enrollees, among whom persons with disabilities and co-occurring substance use problems comprise a disproportionate share. Health home services are expected to increase identification of substance abuse problems and patient engagement. However, access to treatment will continue to be dependent on the level of funding available for substance abuse treatment.

The Health Care Authority has also transitioned the (non dual) Disabled Medicaid population from fee-for-service medical coverage to managed care. In the context of a shift to medical managed care,

[4] Mancuso D, Felver B. *Bending the Health Care Cost Curve by Expanding Alcohol/Drug Treatment*. Olympia, WA: WA State Dept. of Social and Health Services, Research and Data Analysis Division. Sept 2010.

[5] Estee S, He L, Ford Shah M, Mancuso D, and Felver B. *Impact of Screening, Brief Intervention, and Referral to Treatment on Entrance to Chemical Dependency Treatment.* Olympia, WA: WA State Dept. of Social and Health Services, Research and Data Analysis Division. Feb 2010.

our findings point to the potential desirability of aligning financial incentives for the provision of substance abuse treatment in a benefit package unified under a health plan. Towards that end, DSHS and the Health Care Authority are developing a pilot program jointly with the Centers for Medicare and Medicaid Services to implement a voluntary-enrollment integrated managed care program for persons dually eligible for Medicare and Medicaid in King and Snohomish counties in 2014. This pilot will provide an important test of the ability of health plans to effectively manage integrated medical, behavioral health, and long-term services and support services. The agencies' prior experience with the Washington Medicaid Integration Partnership integrated managed care pilot points to the importance of carefully monitoring the extent to which health plans respond to the financial incentives illustrated in this study to increase access to substance abuse treatment in its enrolled population.[6]

TECHNICAL NOTES

METHODS

This study focuses on the experiences of Disabled Medicaid adults, including clients receiving coverage through the Disabled, Blind and Presumptive SSI programs. The analyses include only persons enrolled in Categorically Needy (CN) Medicaid coverage. Medical cost offset analyses focus on Medicaid-only clients because most medical care for dual eligibles is paid for by the Federal Medicare program. Nursing home cost offset analyses include dual eligibles.

Our analysis design requires separating adults with Disabled Medicaid coverage into two groups: clients with identified substance abuse problems and clients without substance abuse problems. For each client in the medical coverage group and for each month of coverage used in our analysis, we identified whether the client had a recent indicator of a substance use problem using flags in the client's administrative records including: (1) diagnosis of a substance use disorder in an MMIS paid claim; (2) substance abuse treatment or detoxification encounters reported in DBHR's TARGET management information system; (3) Washington State Patrol arrests associated with substance-related charges such as driving while intoxicated or possession of an illicit drug; and (4) receipt of medications used to treat substance abuse problems such as buprenorphine or disulfiram. We looked for these indicators in the two-year period of time leading up to the measurement month to classify a client a having a recent need for substance abuse treatment.

DATA SOURCES

Medical cost, nursing home cost, pharmacy, diagnoses, and monthly medical coverage data were derived from the ProviderOne and legacy MMIS data systems. Substance abuse treatment cost data were derived from DBHR's TARGET management information system, combined with treatment data from the ProviderOne and legacy MMIS data systems. Data on substance related arrests were derived from the Washington State Patrol charge database.

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Copies of this paper may be obtained at www.dshs.wa.gov/rda/ or by calling DSHS' Research and Data Analysis Division at 360.902.0701.

Please request REPORT NUMBER 4.88

[6] Mancuso D, Ford Shah M., Felver B, and Nordlund D. Washington Medicaid Integration Partnership: Medical Care, Behavioral Health, Criminal Justice, and Mortality Outcomes for Disabled Clients Enrolled in Managed Care. Olympia, WA: WA State Dept. of Social and Health Services, Research and Data Analysis Division. Dec 2010.