The Iowa Managed Substance Abuse Care Plan: Access, Utilization, and Expenditures for Medicaid Recipients

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Abstract

The Iowa Managed Substance Abuse Care Plan (IMSACP) used a behavioral health care organization to manage expenditures for treatment of alcohol and drug dependence financed through Medicaid, block grants, and state appropriations but maintained relatively distinct eligibility and benefit structures for Medicaid-eligible individuals. Medicaid claims, encounters, and eligibility files were reviewed for 2 years before and 3 years after implementation of IMSACP to evaluate changes in access, utilization, and expenditures. The rate of substance abuse treatment doubled, use of inpatient hospital services decreased, and residential and outpatient services increased. Direct care costs decreased, while total expenditures held steady. The Iowa experience suggests that a well-planned initiative can control costs and improve access and utilization.

Introduction

Iowa was first state to use a managed behavioral health care organization to manage services for both Medicaid recipients and uninsured low-income adults not eligible for Medicaid. The Iowa Managed Substance Abuse Care Plan (IMSACP) began in September 1995. Eligibility criteria and benefits, however, remained separate and distinct for Medicaid recipients. Plan details are summarized elsewhere.[1,2] As part of a multistate evaluation funded through the Center for Substance Abuse Treatment, IMSACP effects on the organization, financing, and delivery of alcohol and drug abuse treatment services in Iowa were assessed. A companion article examines services for the uninsured[3]; this article addresses impacts on access, utilization, and cost of Medicaid benefits. IMSACP results may inform efforts in other states to integrate public financing sources for treatment of alcohol and drug abuse.

Evaluations of Iowa Behavioral Health Managed Care Initiatives

Iowa introduced a mental health carve-out—the Mental Health Access Plan (MHAP)—in early 1995; a series of published studies[4–9] examined its impacts. MHAP was characterized as one of the more successful public managed care initiatives[8] (although aspects of that characterization were challenged).[10] Reviews of Iowa's substance abuse carve-out (IMSACP), however, are limited to

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two reports[11,12] and one study.[13] An assessment of IMSACP services for non-Medicaid clients used administrative data from the state's Substance Abuse Reporting System (SARS) and noted little impact on access and outcomes.[11] There were some indications that treatment completion rates declined and that satisfaction decreased following IMSACP introduction. Despite intent to study only non-Medicaid patients, a critique[14] suggests that Medicaid and non-Medicaid admissions were included in the analysis. A companion study[12] assessed Medicaid services and reported decreases in inpatient admissions and in the length of inpatient stays and an increase in the number of Medicaid recipients served in ambulatory and residential services. Its telephone survey of patients completed interviews with only 22% of the sample, however. Compared with Medicaid fee-for-service costs, savings of approximately $40,000 were estimated for the first 10 months of IMSACP operation.[12]

The initial studies of IMSACP examined a limited period of time after IMSACP implementation (10 to 12 months); sample selection problems may have constricted the value of these analyses. Prior to the advent of managed care not all providers participated in the state's SARS—the source of the services data analyzed. The addition of these providers to the SARS system and the impact of the data from these providers after the advent of the managed care initiative were not controlled in the analyses. The added providers may have changed the mix of patient characteristics, and increases in admissions may reflect additional providers rather than increased access to existing programs. The investigations also combined intensive outpatient services with extended outpatient services. Combining these service types may have muted the true effect of managed care on each service if one increased and the other decreased.

The current evaluation, therefore, used longer periods before and after IMSACP (2 years prior and 3 years subsequent), examined Medicaid and uninsured service recipients separately, and carefully tracked and did not collapse categories of services. Analyses examined service access and utilization before and after IMSACP for Medicaid and uninsured patients. Change also was assessed in patterns of care and costs of care. Services for Medicaid recipients are the focus of this article. Because methods differed, services for uninsured individuals who were not eligible for Medicaid were examined separately.[3]

Methods

IMSACP Medicaid eligibility and benefits

IMSACP Medicaid included most categories of Medicaid beneficiaries: Family Medical Assistance Plan (FMAP) recipients, FMAP related, Supplemental Security Income (SSI) recipients, SSI related, dual eligible (Medicaid/Medicare, except qualified Medicare beneficiaries), medically needy with no spend down, less than 65 years of age, and persons residing in a psychiatric medical institution for children (PMIC; this group was eligible beginning April 1, 1996). Five groups of Medicaid beneficiaries were excluded: persons age 65 or older, persons in an intermediate care facility for mental illness or mental retardation, persons in nursing facilities, people in a state mental health institute (they are not eligible for Medicaid), and medically needy persons with a spend down.

IMSACP benefits provided seven levels of care (listed from least to most intensive): (1) continuing care, (2) halfway house services, (3) extended outpatient services, (4) intensive outpatient services, (5) primary extended residential services, (6) medically monitored residential services, and (7) medically managed inpatient services, including medical detoxification (Medicaid beneficiaries only). Care provided within these levels had to be for primary substance abuse and dependence diagnoses. Preauthorization of services was required for levels 4 through 7 except in cases of emergency. The benefits authorized under IMSACP expanded coverage for substance abuse treatment for Medicaid recipients; new services included continuing care, halfway house services, primary extended residential services, and medically monitored residential services.

IMSACP substantially expanded Medicaid benefits for substance abuse treatment. Before IMSACP, Medicaid benefits were limited to medically necessary inpatient and outpatient services provided in 15 hospitals. Preauthorization and the use of patient placement criteria were not required. Hospitals were reimbursed on a fee-for-service basis. Consequently, inpatient services were emphasized and inpatient lengths of stay were prolonged. Community-based non-hospital services were not covered. Access to Medicaid benefits was restricted geographically to the areas covered by the eligible hospitals and benefits were limited. About 17% of the patients receiving non-Medicaid services reported Medicaid eligibility both before and after the introduction of IMSACP—the impact of Medicaid eligibles on non-Medicaid services appears to have been relatively constant over the course of the evaluation.

Administrative data

The investigation used secondary analyses of administrative data from eligibility files, claims records, and encounter records and tracked changes in eligibility and utilization. The Brandeis University Institutional Review Board reviewed and approved the study protocol prior to data acquisition.

Eligibility files

Medicaid eligibility files for the period July 1993 to June 1998 (fiscal years [FYs] 1994 through 1998) were obtained from the University of Iowa, Public Policy Center upon authorization from the Iowa Department of Human Services. The number of IMSACP eligibles was estimated for FYs 1994 and 1995 (pre-IMSACP period). Medicaid beneficiaries whose Medicaid aid type matched the types included in IMSACP were selected as the pre-IMSACP comparison group (ie, beneficiaries who would have been eligible for IMSACP had IMSACP been operative during these two fiscal years—FMAP recipients, FMAP related, SSI recipients, SSI related, dual eligible (Medicaid/Medicare, except qualified Medicare beneficiaries), medically needy with no spend down, less than 65 years of age, and persons residing in a PMIC. The counts of IMSACP eligibles for FYs 1996, 1997, and 1998 used IMSACP eligibility markers contained in the eligibility files. The number of Medicaid beneficiaries declined over the 5-year study period from about 245,000 (FY 1994) to 221,000 (FY 1998); IMSACP eligibles showed a similar trend (from 208,000 in FY 1994 to 180,000 in FY 1998).

Claims

Medicaid claims data for the period July 1993 to June 1995 (FYs 1994 and 1995) were obtained from Consultec, Inc. (Iowa contracts with Consultec for Medicaid claims administration services.) Substance abuse claims were identified using the primary *International Classification of Diseases, Ninth Edition* (ICD-9) diagnoses (291, 292, 303 to 303.93, 304 to 304.93, 305 to 305.93) and diagnosis-related groups (DRGs; 433, 434, 435, 436, 437) associated with substance abuse and dependence. Before and after IMSACP, Iowa Medicaid identified only these diagnostic codes as substance abuse treatment. The FY 1994 and 1995 claims contained substance abuse treatment service data for Medicaid beneficiaries paid on a fee-for-service basis during the pre–managed care period. These claims represent "institutional" claims (ie, claims for inpatient substance abuse treatment services provided to Medicaid beneficiaries in hospital settings and outpatient substance abuse treatment services provided in outpatient settings that were attached to hospitals). Prior to IMSACP, Medicaid did not reimburse for substance abuse treatment services provided in freestanding settings. Medicaid paid medical claims, and mental health claims were not included in the analysis.

Encounter data

Encounter data for the period September 1995 to June 1998 (10 months of FY 1996 and FYs 1997 and 1998) were obtained from Merit Behavioral Care (the managed care organization that processed Medicaid-funded substance abuse treatment services under IMSACP). These claims were paid claims for substance abuse treatment services and represented the totality of Medicaid paid substance abuse services for these clients under IMSACP.

The eligibility and claims data contained in this report may not be identical to the numbers found in other Iowa documents. The differences are attributable primarily to adjustments and changes in databases that occur over time (eg, changes in patient eligibility, resolution of outstanding claims) so that the exact counts made at earlier points in time could not be reproduced. Other differences may reflect selection factors employed in the analysis, operational definitions, or methodologic decisions that altered the size or composition of the study group. These differences are acknowledged merely to recognize the potential for differences, not to question the validity of the data.

Results

Access, utilization, and costs were examined for Medicaid recipients eligible for IMSACP during the 3 years after implementation and compared with a similarly defined eligibility group selected from the 2 years prior to IMSACP implementation. Table 1 provides summary information, while Table 2 lists the percentages in each eligibility category by year. It documents a relatively consistent pattern of eligibility membership across study years; little change was observed in the makeup of the Medicaid eligibles over time.

Access

The number of eligible Medicaid recipients, IMSACP eligibles, and individuals who received substance abuse treatment are recorded in Table 1 for each study year. Declines in the number of Medicaid recipients and IMSACP eligibles during the study period are consistent with national declines in Medicaid caseloads. Despite the decline in eligible individuals, there was a noticeable increase in the number treated for alcohol and drug abuse and dependence (from about 2,400 in FY 1994 to more than 4,200 in FYs 1997 and 1998). As a result, there was a twofold increase in the rate of substance abuse treatment per 1,000 IMSACP eligibles (FY 1994 = 11.5; FY 1998 = 23.5) following the expansion of Medicaid benefits and the introduction of IMSACP. Major increases corresponded with the first 2 years of IMSACP implementation.

Within Medicaid eligibility categories, the proportion of children and adolescents increased from 19% (FY 1994) of individuals with substance abuse treatment to 27% (FY 1998) while dual eligibles (Medicaid and Medicare) decreased from 14% (FY 1994) to 7% (FY 1998). Other eligibility categories (disabled and adults enrolled in FMAP) were relatively stable.

Utilization

Medicaid claims and encounter data record the services provided and, following the introduction of IMSACP, document increases in the total units of care provided, more services being provided to each recipient, and changes in the levels and intensity of treatment. Between FYs 1994 and 1998, substance abuse claims increased more than fivefold (27.6 to 148.5 per 1,000 eligibles). Actual claims increased from 5,730 to 26,717, and claims per patient increased from 2.4 to 6.3 per patient (Table 1). Some of the increase may reflect an "unbundling" (or disaggregation) of claims when provider eligibility was expanded beyond hospital settings. Data were not available to examine this hypothesis, and it was not possible to reaggregate claims. As access doubled, it seems reasonable to conclude that utilization increased at least twofold and perhaps as much as fivefold. Movement away from inpatient services also was apparent when levels of care were examined.

Table 1

IMSACP eligibility, access, utilization, and costs by fiscal year

	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
		Eligibility			
Medicaid beneficiaries	244,817	241,887	238,916	232,472	220,917
IMSACP eligible beneficiaries	207,574	206,177	184,110	189,556	179,917
		Access			
Individuals with substance abuse treatment	2,398	2,440	3,130	4,265	4,228
Treatment rate per 1,000 eligibles	11.5	11.8	17	22.5	23.5
		*Utilization**			
Claims	5,730	7,796	19,002	24,890	26,717
Claims per patient	2.4	3.2	6.1	5.8	6.3
Claims per 1,000 eligibles	28	38	103	131	148
		Costs			
Total service costs	$7,499,959	$8,639,962	$3,468,366†	$4,793,937	$5,153,295
Average cost/eligible	$36.13	$41.91	$18.84	$25,29	$28.64
Average cost/service recipient	$3,128	$3,541	$1,108	$1,124	$1,219
Average cost/claim	$1,309	$1,108	$182	$193	$193

IMSACP, Iowa Managed Substance Abuse Care Plan.

*Unbundling of claims may contribute to the increase in apparent utilization following the introduction of IMSACP.

†10 months of data; annualized figure is $4.2 million.

Inpatient treatment

The use of inpatient hospital substance abuse treatment services dropped significantly after the implementation of IMSACP. Medicaid claims for inpatient care declined 46% (FY 1994 to FY 1998), and the mean length of stay per hospitalization was reduced 92% (16.1 days to 2.3 days).

Table 2

Medicaid IMSACP eligibles by eligibility category in percent

Medicaid category	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
FMAP ge 19	25.2	25.2	24.1	23.6	22.8
FMAP le 18	19.3	20.6	21.9	24.6	27.1
SSI ge 19	23.0	22.9	20.4	18.5	17.9
SSI le 18	1.1	2.0	1.7	2.7	1.7
Dual eligible	13.5	9.2	7.3	6.5	6.5

IMSACP, Iowa Managed Substance Abuse Care Plan; FMAP, Family Medical Assistance Plan (Aid to Families with Dependent Children/Transitional Assistance to Needy Families); SSI, Supplemental Security Income and Supplement Security Disabled Income; dual eligible, eligible for both Medicare and Medicaid.

IMSACP eliminated the use of hospital beds for post-detoxification rehabilitation. Care was provided in residential and intensive outpatient settings.

Residential and outpatient care

Prior to the implementation of IMSACP, Medicaid benefits for substance abuse treatment were limited to inpatient and outpatient hospital care. The waivers that authorized IMSACP implementation expanded Medicaid benefits to include residential services and to permit outpatient services in community treatment programs. As a result, inpatient hospital claims decreased from one third (33.2% in FY 1995) to 5% (FYs 1997 and 1998) of substance abuse claims; outpatient services increased from 66% (FY 1995) to 81% (FYs 1997 and 1998) of the claims and residential treatment accounted for about 13% of the claims (FY 1998). Residential services were most likely to be used for children and adolescents (about 23% of the claims in FYs 1997 and 1998). These data reflect the increased use of lower cost, less intense levels of service that has been observed in other states.[15]

Treatment episodes

A treatment episode was defined as ongoing substance abuse treatment services without a gap of more than 30 days and without readmission to inpatient or residential detoxification services. The length of a treatment episode increased from 23 days (standard deviation [SD] = 35 days FY 1994 and 37 days FY 1995) before IMSACP to more than 40 days under IMSACP—40 days FY 1996 (SD = 52 days), 40 days FY 1997 (SD = 50 days), and 43 days FY 1998 (SD = 55 days).

Expenditures

Medicaid expenditures for substance abuse treatment were estimated using claims and encounter data. The administrative fees for EFR and Merit are not included in these estimates. Direct care expenditures decreased dramatically from $8.6 million in the year prior to IMSACP (FY 1995) to an annualized reimbursement of about $4.2 million (FY 1996) and rose slightly in the next 2 years to $5.2 million (FY 1998). Mean reimbursement per service recipient dropped from $3,100 and $3,500 in the 2 years prior to IMSACP to about $1,100 under IMSACP. The shift from inpatient to outpatient services was apparent in the reduction in reimbursement per claim ($1,100 to $190; Table 1).

These decreases are related to the change in the mix of substance abuse treatment services available to Medicaid IMSACP beneficiaries (ie, the decreased use of relatively expensive intensive treatment services and the increased use of less expensive, less intensive services). Expenditures for inpatient care decreased more than $7 million after the introduction of IMSACP from $7.5 million (FY 1995) to less than $500,000 in FY 1997 ($319,896) and FY 1998 ($477,042). Expenditures for outpatient services rose slightly ($1.1 million in FY 1995 to $1.6 million in FYs 1997 and 1998). Residential services were not reimbursed prior to IMSACP; under IMSACP expenditures increased each year: FY 1996 = $1.8 million (10 months of expenses), FY 1997 = $2.9 million, FY 1998 = $3.1 million).

Estimated direct service expenditures differ from capitation payments. Full-year capitation payments (including administrative expenses) were approximately $8.3 million in FYs 1997 and 1998. Thus, total savings were minimal if no increase in expenditures is projected. Approximately 60% of actual capitation payments were expended on direct services.

Discussion

IMSACP included both Medicaid and non-Medicaid services and began in September 1995. Medicaid benefits expanded to include outpatient and residential services for alcohol and drug abuse and dependence. Policy makers, the managed care organizations, and treatment providers in Iowa

collaborated with the state Substance Abuse Managed Care Evaluation Project to review IMSACP implementation and effects.

Substantive change in the delivery of care for alcohol and drug abuse and dependence was apparent. The inclusiveness of IMSACP eligibility criteria, expansion of Medicaid benefits, and increase in Medicaid service providers combined to enhance access to care. The fact that these changes occurred simultaneously means that it is not possible to disaggregate the unique influence of each change; the simultaneous implementation may have had synergistic effects. As a result, access to substance abuse treatment doubled from about 12 (FYs 1994 and 1995) to 24 per 1,000 Medicaid IMSACP eligibles in FY 1998.

Shifts also were observed in the utilization of care. There was a 366% surge in the number of paid Medicaid claims between FYs 1994 and 1998 and a substantive change in the pattern of service utilization. Services were relocated from relatively expensive inpatient hospital care to lower cost, less intensive settings. The introduction of residential alternatives to inpatient hospital care and increased use of outpatient services led to substantial reductions in the use of hospital care. Inpatient hospital claims dropped from about 10 per thousand to about 5 per thousand, and length of stay declined from 16 days per claim to about 2 days per claim. Linkages between hospital detoxification services and long-term residential and outpatient services, therefore, are more critical in the acquisition of stable recoveries. Increases in length of treatment episodes following the introduction of IMSACP from 23 days to at least 40 days suggest that linkages were enhanced. Lengths of stay, however, are still below the 90 days research[16] suggests is required for the induction of a more stable recovery.

As a result of the shift in settings and reductions in length of stay in hospitals, total Medicaid expenditures remained steady while IMSACP was in place (FYs 1996 through 1998). More units of care were provided to more recipients without increases in total expenditures. The dramatic reduction in the direct care (not including administrative expenses) costs per recipient, however, raises concerns about potential impacts on the effectiveness and quality of care. Investments in outcome monitoring may be useful in assuring stakeholders that effectiveness and quality expectations have not been compromised and that sufficient resources are available for service delivery. Iowa implemented patient placement criteria to help ensure that patients were placed in the most appropriate settings and that they received care of appropriate intensity. However, ongoing detailed assessments of clinical care and outcomes are required to have full confidence in the system's ability to maintain quality of care.

The careful design and implementation of IMSACP appears to have resulted in an initiative that met its goals to control costs, increase access to care, and maintain quality of care. Services for Medicaid patients shifted from inpatient settings to intensive outpatient services and lengths of stay declined in all settings, while the length of an episode of care increased. Overall, Iowa may be seen as a model for effective implementation of a managed care initiative for publicly funded alcohol and drug abuse treatment services.

Implications for Behavioral Health Services

Demonstrations that behavioral health care organizations can appropriately manage publicly funded treatment for substance abuse reduce but do not eliminate concerns for the vulnerable children, women, and men served in public systems of care. Iowa appears to have crafted a well-designed managed system of care for Medicaid recipients that reduced total expenditures and simultaneously led to increases in the number of men, women, and children entering treatment for alcohol and drug abuse and dependence. The Iowa experience suggests that careful planning and implementation of managed care plans for publicly funded substance abuse treatment can lead to system improvements.

A persistent uncertainty, however, is the impact of reduced expenditures on patient outcomes. There was no evidence of decrements in patient outcomes in IMSACP because the study drew on administrative data and was not designed to monitor functioning and outcomes following treatment.

Cost per service recipient declined from $3,100 to about $1,200. Pre-IMSACP costs were high because of a reliance on hospitals for Medicaid services. Movement to less intensive settings was an appropriate cost-reduction strategy. But, at some point, additional efficiencies will be hard to achieve and costs of care are likely to increase. If provider payments are reduced much more, there is danger that the care provided would be of too short a duration and of insufficient intensity to promote long-term recovery. States that implement managed care for publicly funded alcohol and drug abuse treatment services, therefore, may find it useful to invest in the development of performance measures and outcome monitoring so that they can assess quality of care as well as cost, access, and utilization.

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