Long-Term Performance of the Pennsylvania Medicaid Behavioral Health Program

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Summary

The Pennsylvania Medicaid Behavioral HealthChoices program saved an estimated $4 Billion between 1997 and 2008 in the Southeast, Southwest, and Lehigh/Capital regions at the same time it increased access to behavioral services overall and for key vulnerable sub-populations, and also demonstrated improvement on key quality performance measures. The cost savings estimates were carefully vetted and consistently use conservative assumptions to arrive at the total of $4 Billion.

The HC program has the following features which are unique and likely contribute to this performance:

- A single contractor for each county unit
- County right of first opportunity to contract with DPW to run their county-level HealthChoices program[1]
- A collaborative model capitalizing on the historic strengths and expertise of Pennsylvania's County public behavioral health systems, other county-level human

[1] Pursuant to the Mental Health and Mental Retardation Act of 1966 (50 P.S. § 4201).

service systems, local providers, and managed care partners, many with local nonprofit roots

- Earnings by counties are retained in the program or reinvested in behavioral health system infrastructure
- Accountability to a County or joinder-level oversight board or governance body, responsible for financial performance, access, and quality

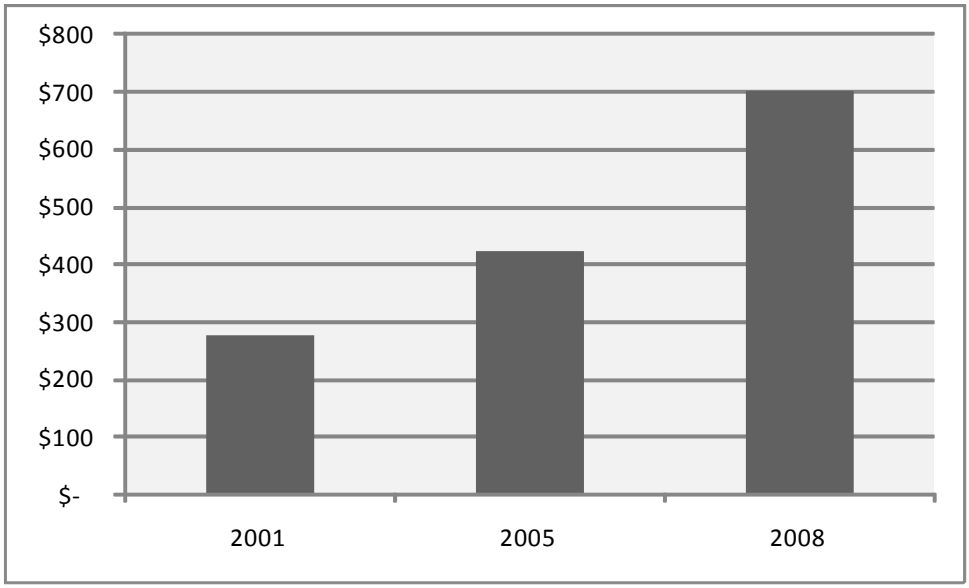
The design of the "county right of first opportunity" HealthChoices behavioral carve-out was a reaction to the "carved-in" voluntary managed care program preceding HealthChoices, which was alleged to have serious problems with adverse selection among plan choices related to behavioral status and diversion of behavioral dollars into managed care company profits. Issues in other states where Medicaid managed care programs have resulted in documented and newsworthy performance problems have been shown to be related to lack of expertise in public behavioral health issues. To illustrate the importance of that issue, this study begins with a comparison of rates of behavioral diagnoses in a Pennsylvania County in its Medicaid vs. commercial insurance population from the same region, and shows that the Medicaid population has a rate of major depression that is 3 times higher, a rate of bipolar disorder 3 times higher, and a rate of schizophrenia/

schizoaffective disorder 20 times higher than the commercial population from the same area. Expertise with the Medicaid population's behavioral issues and interfaces with the range of other human service systems aiding these individuals and operated by Pennsylvania counties is cited as a key to effective management of the program.

To arrive at the $4 Billion cost savings estimate relative to projected FFS payments that would have occurred in the absence of HealthChoices, data prepared by the Commonwealth's actuarial consultant (Mercer Government Human Services) were obtained and evaluated. Key assumptions were tested and each assumption used by Mercer was found to be more conservative than the multiple validation checks performed. For example, the HealthChoices per-person rate of cost growth was well below the assumed rate of cost growth in Fee-For-Service estimated by Mercer at 5.5%. The 5.5% assumption was used even though the pre-HealthChoices behavioral cost growth in Pennsylvania Fee-for-Service Medicaid was 9.5%, and the national rate of Medicaid behavioral health cost growth during the same period was approximately 4.5% at a time when the great majority of these programs had recently converted to managed care. This conservatism in assumptions makes the cost savings estimates conservative, such that a figure of $5 billion or higher could

also be defensible. The study also assesses and fails to find any evidence for cost-shifting from the behavioral program into the physical health system, into pharmaceutical spending, or into County base funding.

Exhibit E-1
Pennsylvania Behavioral HealthChoices Savings Relative to FFS by Year
(In $ Millions)



Of the $4 Billion in estimated savings, approximately $1.2 Billion was used to absorb into the Medicaid program those discharged from State Hospital closures (State Hospital care is not financed with Medicaid funds), to absorb residential treatment providers previously paid by the Office of Children, Youth, & Families, and to build behavioral health infrastructure through reinvestment of savings achieved by county HealthChoices contractors.

While saving approximately $4 billion under conservative assumptions, HealthChoices also demonstrated dramatic increases in access to services and significant improvements in quality measures. Resources were used more efficiently by achieving large increases in access to services among Medicaid recipients. For example, the percentage of individuals with SMI receiving services increased 50%-60% over the period between 2003 and 2008. The disabled, who in some managed behavioral health programs have had decreases in access to care, had an increase in the percentage of individuals receiving behavioral services of 25%. African-Americans had an increase in the percentage of recipients receiving services of 30%-40%. Of the eight access performance measures tracked by DPW, one declined 1% and the other seven increased by between 27% and 65%. Similarly, seven of eight quality metrics tracked by DPW increased over the same 2003-2008 period, with one showing a small decline.

The ongoing savings generated by the program, its superior performance measurement results, and its stability, all over a period of more than 10 years, make it a remarkably successful public policy initiative.

Introduction

Pennsylvania first implemented its HealthChoices mandatory Medicaid managed care program under a Federal 1915(b) waiver in 1997 in the five counties comprising the Philadelphia metropolitan region, subsequently expanded the program in 1999 to the 10 counties in the Pittsburgh metropolitan region, and in late 2001 to the 10-county Lehigh/Capital region, including Harrisburg, Reading, and Allentown. Programs in these three "legacy regions" have, then, been operating for between 9 and 13 years (beginning in 2006-2007 the program was expanded to the rest of the state). The waiver uses a relatively unique design in which the County is generally the geographic contracting unit. Multiple plans compete for "physical health" business in each county, but behavioral health is administered by a single management entity for the full Medicaid population of the county. The County itself is given right of first opportunity to manage the behavioral health program as a contractor with the state, and is awarded the contract if it can demonstrate that it has developed an approach to management that is sound clinically, programmatically, and financially. In the legacy regions all of the counties (or multi-county entities in some cases) except one elected to exercise their right of first

opportunity and were subsequently approved by the state to oversee their own behavioral health programs covering all Medicaid recipients in their county catchment areas[1]. This approach followed from the long history of strong county government in Pennsylvania, including extensive behavioral health program infrastructure at the county level. The experience in the voluntary managed care waiver which preceded HealthChoices was also influential in the HealthChoices design, in that the voluntary program's fully "carved-in" model resulted in reports of significant problems with risk-avoidance based on behavioral status for some plans, and resulting adverse selection for the Medicaid fee-for-service (FFS)system[2].

The federal Patient Protection and Affordable Care Act has important provisions applying to Medicaid that will be an additional impetus for states to review their Medicaid programs. A clear understanding of available evidence and proper distinctions between different models and their lessons for financing, delivery system, payment methods, and information infrastructure requirements will be important to states in making system design decisions.

Background

The phrase "Behavioral health carve-out" is used to describe a wide range of arrangements that generally involve management of behavioral health services in a contractual and organizational structure separate from the one responsible for management of insurance for "physical health." These arrangements differ along a variety of dimensions, including whether the population is commercial or Medicaid, the size of the geographic/population unit for each management contract, the locus of performance responsibility, and the form of ownership of the contacted behavioral health MCO (BHMCO). A recent comprehensive literature review through 2004 by Frank and Garfield, which addresses the general concept of behavioral "carve out", finds a range of financial and quality outcomes for these arrangements which are generally positive but exhibit significant variation across the dimensions described above. Medicaid carve-out arrangements overall were found to save between 17%-33% in spending[3]. Savings were in significant part based on cost per unit and to a lesser extent on units per user; they were not based on denial of service. There is evidence in some cases of cost shifting to other services outside of carve-out such as behavioral pharmacy costs, and there is mixed evidence on access

and quality issues for more seriously ill populations. The arrangements described and the degree of variation in them suggests that specific features of these carve-outs may be relevant to their success or problems. For example, prior experience managing publicly financed populations was cited as a potential explanatory factor in variation in Medicaid program outcomes.

Program evaluations in the literature generally and those specifically reviewed by Frank and Garfield often study the first few years of a program's operation and are typically completed two or more years after the period being evaluated. The literature generally does not contain assessments covering a longer time frame. Can a Medicaid behavioral carve-out perform positively in reducing cost growth and in maintaining or improving access and quality over a time horizon of 10 years or more? While a large-scale, comprehensive program evaluation of Pennsylvania Behavioral HealthChoices would be valuable, this more focused examination of the long-term changes in basic program financial, access, and quality measures provides useful information about how this model has functioned over the past decade.

Study Data and Methods

DATA The Pennsylvania Department of Public Welfare (DPW) Office of Mental Health and Substance Abuse Services (OMHSAS) provided several types of data which allow examination of historical program experience for Behavioral HealthChoices. The DPW data included summary (region-level for the three legacy regions) information on the pre-HealthChoices FFS spending, summarized capitation payments to HealthChoices contractors for 1997-2008, and access and quality performance measures for 2003-2008. More detailed cost data for specific policy and program changes added to HealthChoices during the 1997-2008 timeframe were also provided by DPW. In addition, DPW provided actuarial factors prepared by its consultants, Mercer Government Human Services ("Mercer"), for aspects of the calculations discussed further below. More detailed information was not readily available from DPW. Community Care Behavioral Health Organization, a nonprofit MCO covering the largest number of members in the Pennsylvania Behavioral HealthChoices program, provided detailed claim and eligibility data for its HealthChoices operations over 10 years in 34 Pennsylvania counties, as well as commercial behavioral health spending levels for one geographic unit in which it manages both Medicaid and commercial populations.

ANALYSIS OF MEDICAID POPULATION DIAGNOSTIC PROFILE In order to assess a behavioral health program, it is important to be clear about the nature of the program and its covered population. It is generally understood that the Medicaid population has a greater burden of behavioral health issues than commercial or Medicare populations, and that it is frequently the primary payer for persons with serious mental illness. In order to quantify and clarify this general understanding, and set the context for the analysis of the program's performance, an analysis was conducted comparing the behavioral health diagnostic and spending profiles of a commercial population and a Medicaid population in the same geographic area. Because these comparative data are not generally available, and because data from both covered populations were available from Community Care for Allegheny County, Pennsylvania as part of another ongoing study, an analysis was conducted using Allegheny County as an example of the degree of difference between the Medicaid and Commercial populations. The Medicaid data covered all Medicaid HealthChoices enrollees in Allegheny County in 2008, and the commercial data covered all members of UPMC Health Plan residing in Allegheny County during the same period. The commercial population is not all-inclusive for the County, but as a plan sponsored by UPMC Health System, which has tertiary care services for all specialties, its diagnostic profile is

likely to be at least average in acuity for commercial enrollees in the region. Using claims data for both populations, individuals were assigned into a mutually exclusive set of behavioral diagnostic categories, and a comparison between the Medicaid and commercial populations in the prevalence of diagnoses and amount of spending on a per member basis was made.

ANALYSIS OF PROGRAM SPENDING The analysis of program spending was conducted in several steps, including analyses testing the validity of the assumptions used in the spending comparison calculations.

- PROJECTION OF FEE-FOR-SERVICE SPENDING: DPW's actuarial consultant used Pennsylvania Medicaid's FFS claims to construct a history of baseline FFS spending levels immediately prior to HealthChoices implementation, then projected it over the timeframe of HealthChoices program operation using a trending factor to provide a comparison point for the HealthChoices spending levels[4]. Two important assumptions were made in this calculation. First, some counties operated the voluntary (i.e., not full-population) "carved in" managed care program prior to HealthChoices implementation, and claims data were not available for the managed care portion of the population. Mercer applied an actuarial selection factor to adjust (downward) the available FFS baseline data to represent

an average cost profile for the full-population baseline. Second, Mercer measured the trend in FFS claims for those portions of the state for which no managed care was implemented (i.e., other than the three legacy zones), and used the measured trend rate to inflate the legacy zone FFS baseline into projected FFS spending to estimate the impact of HealthChoices relative to FFS. A 3.6% administrative load, representing the Commonwealth of Pennsylvania's administrative overhead rate for its Medicaid program, was then added. The selection factor and trend rate assumptions are the key sensitivity variables in this calculation. In order to test the actuaries' assumptions as part of this study, archived benefit-equivalent FFS spending summaries for legacy region counties were collected. The selection assumption was tested by measuring the rate of growth in claims since HealthChoices implementation for those counties with a starting point of 100% FFS membership. The spending reduction rate implied by this calculation (which did not require a selection adjustment) was made to those produced using data from all the counties and Mercer's selection adjustment. To assess the assumption of counterfactual FFS growth during the HealthChoices period, the pre-HealthChoices FFS spending trend for 100% FFS counties was measured and compared to post-HealthCoices spending growth. In addition, a comparison was made to national Medicaid behavioral health spending growth.

- HEALTHCHOICES SPENDING: Spending on HealthChoices is measured by DPW's capitation payments to the counties for operation of their HealthChoices programs. These payments were available for all three legacy regions, with program inception dates in 1997, 1999, and 2001 for the Southeast, Southwest, and Lehigh/Capital regions. Capitation spending provided by DPW contained the component for services, and was adjusted for average MCO administration and county oversight. Benefits covered by this capitation include all "in-plan" Medicaid services, with allowed substitution for DPW-approved cost-effective alternatives.

- ADJUSTMENT FOR ADDITIONAL BENEFITS: Three major initiatives not in the historic fee-for-service program that increased Medicaid costs were implemented into HealthChoices over the period being evaluated. First, there were state hospital closures in the legacy regions, and spending for individuals receiving treatment in state hospitals was not covered by Medicaid. DPW made adjustments to the capitation rates to allow for the marginal effect of high-use individuals on the average rate. Second, a large material program change was made to Medicaid via the Integrated Children's Service Initiative (ICSI). Residential providers previously paid by the Commonwealth's Children and Youth program were re-contracted as residential treatment providers and paid by Medicaid,

resulting in large marginal spending increases by the Medicaid program. Costs for these providers were not present in the FFS data. Third, savings earned by the counties from their net income on the Healthchoices program were required to be applied to "reinvestment" which funded start-up of Medicaid services, development of cost effective alternatives, or, on a more limited basis, one-time-only infrastructure improvements. All three of these new initiatives were paid for from the capitation payment history described above, and none of them were in the FFS history to which the capitation payments are to be compared. In order to make the comparison of the HealthChoices program payments to the counterfactual FFS projections “apples to apples”, spending detail for these three items by region and year, provided by DPW, were subtracted to get a net “FFS comparable capitation spending.” The comparison of FFS to capitation payments is made both on a gross basis (without adjustment to the capitation rates for the three factors), and on a net basis (removal from the capitation of these new spending items)[5].

- ASSESSMENT OF POTENTIAL COST SHIFTS: There are several ways in which costs could have been shifted from the HealthChoices program into other funding channels. In order to be sure that such cost-shifting is not responsible for any program spending reductions measured, these potential avenues

were investigated. First, theoretically, costs could have been shifted into the physical health system component of the Medicaid program. However, the Pennsylvania program has specific benefits and provider networks for the respective physical and behavioral programs, and direct shifting of service costs is not possible. While denials of service in the behavioral system could lead indirectly to increased spending on physical services (e.g., additional accidents related to restrictions on substance abuse services), as discussed in the results section, all indications are that access to care increased dramatically under HealthChoices. Specific analysis of this issue was not pursued.

The second potential cost shift is into pharmaceuticals, for which the behavioral program does not have fiscal responsibility. To assess this possibility, trend rates in behavioral pharmaceutical spending for legacy region counties in the more recent years for which it is available were evaluated, and the incentives for providers in the program are analyzed.

Third, costs could have been shifted into county "base funding" of behavioral services. Base funding to counties via the Commonwealth finance some behavioral services. The level and growth rate in base-funded behavioral services for Allegheny County, for which data were available, was evaluated to test this possibility.

ANALYSIS OF ACCESS AND QUALITY INDICATORS As part of its HealthChoices program, DPW measures a set of 8 access and 10 quality performance measures in the three regions, and publishes an annual performance report containing these measures for each of the legacy regions. The 2009 report contained measures for most cells in a region-performance measure matrix for the period 2003-2008[6]. A weighted average across the three legacy regions was calculated for each measure, and the percent change in these measures from 2003 to 2009 was calculated. Some measures contained missing observations for certain cells. In these cases, the percent change from first available observation to the most recent available observation was used.

Claim data for all Medicaid-eligible persons in the three legacy regions are not readily accessible from DPW to further explore access, so service penetration rates (number of individuals using the service in a year over the average number of eligible members in a year) couldn't be calculated at a greater level of detail than provided by the summary performance reports. As noted, Community Care Behavioral Health provided detailed claim data from its subset of legacy region counties. From these data, additional access measures were computed. Specifically, data were normalized to a "program inception" date for each legacy region, and percent change in penetration rates

were calculated across the subset from the inception year until the most recent year for which reasonably complete data were available (2009) for the 11 major service categories. Overall measures were also computed for children and adults separately, and for SSI individuals.

STUDY LIMITATIONS As noted in the foregoing, limitations on readily available data circumscribe the scope of the source data for some of the calculations, which are noted. Costs are generally more easily measured than access, and access more easily than quality. Service use is a proxy for access which is easily measured but which does not measure the more subtle aspects of accessibility to appropriate high-quality care. Quality is more difficult to measure than cost, and more careful and detailed assessment would require significant additional resources beyond those which the Commonwealth is already expending on performance measurement.

Study Results

COMPARATIVE DIAGNOSTIC PROFILE Exhibit 1 displays a series of ratios which serve as comparisons of the Allegheny County Medicaid population to the sample sub-set of commercial members from Allegheny County. The row headings describe the various

measures of behavioral illness prevalence and spending which were computed from each of the two data sources. The values in the table are the Medicaid measure divided by the commercial population measure. For example, the penetration rate for behavioral services in the Medicaid population is 3 times the behavioral penetration rate for the commercial population.

Exhibit 1
Ratio of Medicaid to Commercial on Key Measures of Behavioral Spending
Allegheny County, Pennsylvania

Measure	Ratio of Medicaid to Commercial
Behavioral Penetration Rate (annual BH users/average enrollment)	3
Behavioral percentage of total non-drug (PH+BH) spending	7
Percentage of Enrollees with Depression/Major Depression	3
Percentage of total medical dollars spent on individuals categorized as having Depression Or Major Depression [($ PH+BH+Rx for D-MD individuals)/($ all PH+BH+Rx)]	3
Percentage of behavioral dollars spent on Depression/Major Depression	1
Percentage of enrollees with Bipolar	3
Percentage of total medical dollars spent on individuals categorized as having Bipolar disorder [($ PH+BH+Rx for Bipolar individuals)/($ all PH+BH+Rx)]	10
Percentage of behavioral dollars spent on Bipolar	3
Percentage of enrollees with Schizophrenia/Schizoaffective	20
Percentage of total medical dollars spent on individuals categorized as having Schizophrenia Or Schizoaffective Disorder [($ PH+BH+Rx for S/SA individuals)/($ all PH+BH+Rx)]	90
Percentage of behavioral dollars spent on Schizophrenia/Schizoaffective	25

The results clearly illustrate the degree to which behavioral issues are dramatically more common, more acute, and more expensive in Medicaid populations than in commercial populations. The only measure for which the commercial population has comparable value is the percentage of behavioral dollars spent on major depression. However, major depression is three times more prevalent in the Medicaid population, and the commercial value is similar only because the total spending for

commercial behavioral services (the denominator of the measure in question) is so much smaller on a per member basis. Large differences in the level of behavioral illness and in the socioeconomic profile of Medicaid populations, particularly individuals with schizophrenia, indicate that research findings on carve-outs in commercial settings are not likely to be relevant for assessment of Medicaid behavioral carve-outs.

ESTIMATED SPENDING REDUCTIONS The results of the comparison between actual capitation payments for HealthChoices and the projected FFS costs are displayed in Exhibit 2.

Exhibit 2
Commonwealth of Pennsylvania
Projected Fee-For-Service Behavioral Health Medicaid Expenditures Including Administrative Expense
vs.
Historical Behavioral Health Choices Contracted Rates With and Without Reinvestment, ICSI and Hospital Closures
for Three Initial HealthChoices Regions ($ Millions)

Calendar Year	Regions Implemented	Growth in HC Membership	BH HealthChoices Capitation Payments	FFS Benefit-Equivalent HealthChoices Capitation	Projected FFS Costs Including State Administration	Estimated Difference in Spending
1997	SE	N/A	$ 409	$ 354	$ 559	$ 205
1998	SE	0%	$ 419	$ 416	$ 589	$ 173
1999	SE and SW	42%	$ 565	$ 550	$ 783	$ 233
2000	SE and SW	6%	$ 682	$ 668	$ 862	$ 195
2001	SE, SW, and LC	4%	$ 803	$ 793	$ 1,070	$ 277
2002	SE, SW, and LC	15%	$ 1,054	$ 976	$ 1,152	$ 176
2003	SE, SW, and LC	9%	$ 1,197	$ 1,125	$ 1,325	$ 200
2004	SE, SW, and LC	5%	$ 1,231	$ 1,169	$ 1,464	$ 295
2005	SE, SW, and LC	11%	$ 1,367	$ 1,289	$ 1,712	$ 423
2006	SE, SW, and LC	9%	$ 1,642	$ 1,458	$ 1,957	$ 499
2007	SE, SW, and LC	1%	$ 1,734	$ 1,449	$ 2,077	$ 629
2008	SE, SW, and LC	-3%	$ 1,745	$ 1,433	$ 2,134	$ 702
All Years			$ 12,849	$ 11,680	$ 15,685	$ 4,005
Spending Difference HealthChoices vs. FFS :			**-18%**	**-26%**		

Source: Mercer, Commonwealth of Pennsylvania: HealthChoices Behavioral Health Program Histoircal Financial Review, 12/14/2009

The exhibit displays the timeframe over which the three legacy zones were implemented, and the projected FFS spending over those years for those regions that had implemented HealthChoices in each year. Mercer actuaries applied a 5.5% growth rate to estimated FFS expenditures in the base period (pre-HealthChoices) to arrive at estimated counterfactual spending levels (this assumption is discussed further below).

The exhibit also displays the sum of the calculated total HealthChoices capitation rates for each legacy region that had implemented the program in each year. The total estimated gross spending reductions relative to FFS over the timeframe is $2.8 billion, which represents an 18% reduction from the costs projected under a continuing FFS arrangement. Exhibit 2 also displays the total capitation after subtracting the three new programmatic initiatives from each year. These spending components were not part of the FFS baseline, and so the gross comparison between capitation and the projected FFS spending understates the difference in spending, other things equal. After adjusting for these spending components the estimated reduction in spending increases to 26% of projected FFS totals, or just over $4 billion. The estimated reduction relative to FFS of 26% is within the 17-33% savings found by Frank and Garfield in their literature review.

As discussed above in the methodology section, the baseline FFS spending levels were computed from FFS claims using two important adjustment factors. First, they were adjusted with a selection factor to reflect the difference in the unknown risk/spending level that the voluntary managed care population would have had if they had been in FFS prior to implementation. Second, the result was trended forward by 5.5% per year.

To test the plausibility of the selection adjustment in the comparative FFS spending level sequence, we examined summary level FFS spending profiles that were published beginning in 1996 for counties that were scheduled to be converted to HealthChoices. A few counties in these profiles had a mixed FFS/voluntary managed care population in all their annual data, but many had 100% FFS either immediately prior to HealthChoices or in a recent year before HealthChoices. The most recent observation of FFS claims spending for those counties with 100% FFS pre-HealthChoices observations (i.e., no voluntary managed care and no selection adjustment required) was compared to 2009 HealthChoices claims spending levels for the same counties. The implied annual growth rate between these two points was calculated. The average annual growth implied on a gross basis (not excluding ICSI, reinvestment, and state hospital impacts from the 2009 HealthChoices number) was 1.2%, which is 4.3%

lower than the FFS growth assumed by Mercer. The spending reduction implied by this 4.3% difference over the 1997-2008 period, after allowing for the higher administrative percentage in HealthChoices, would be 20% of total FFS spending, 11% larger than the 18% gross-basis percentage spending reduction implied by the Mercer FFS projection shown in Exhibit 2. This suggests that Mercer's selection adjustment to arrive at the total FFS baseline produces a more conservative answer than that implied by the comparison of 100% FFS counties to HealthChoices costs.

To test the 5.5% trend assumption, we also used the FFS summaries. Between 3 and 6 years of pre-HealthChoices FFS data were published for counties in the legacy regions and for counties in the recently implemented counties in the rest of the state. The average annual rate of claims growth prior to HealthChoices implementation was measured for those counties which were entirely FFS from both legacy and non-legacy regions, covering the period 1993-2006. The average rate of growth from this calculation, which unlike Mercer's calculation includes FFS growth in the legacy regions before HealthChoices, was 9.5%, far larger than the 5.5% growth assumed by William M. Mercer actuaries. The 5.5% assumption appears to be reasonable and possibly conservative in comparison.

As another test of the 5.5% FFS trend assumption, we compared it to national trend rates for behavioral health services in a study by Frank, McGuire, and Goldman[7]. The study contains indexed cost levels for Medicaid inpatient services as well as other mental health services for the period 1996-2006. Using the supplementary appendix to the study shows that the indexed level of combined behavioral services (inpatient plus other, excluding pharmacy) was essentially flat over this period. The authors used the CPI to index all the observations to a common year, so for the purposes here the results were "de-indexed" using the medical services CPI published by the Bureau of Labor Statistics[8]. The average annual growth over the 1996-2006 period nationally for Medicaid behavioral health services implied by this calculation is 4.3%. This 4.3% national growth figure is composed heavily of data from other Medicaid managed care programs. Eighty five percent of the 66 approved 1915(b) Medicaid waivers displayed on the CMS website have first-approved dates in the period 1991-2004.[9] The 5.5% unmanaged FFS trend assumption would also appear reasonable, or conservative, when compared to the 4.3% national Medicaid behavioral growth rate with significant managed care composition.

In addition to testing assumptions, two sources of potential cost-shifting from the behavioral program to other programs were

investigated. The first potential cost shift is to county non-Medicaid "base-funded" services, provided by counties directly to individuals. State-wide data were not available for mental health and substance abuse services provided under base funding, though overall approximately 30% of base funds are for MH/SA services. Base-funded spending on MH/SA services for Allegheny County was available. In Allegheny, only 9.6% of services paid for with base funding were for MA eligible persons in 2008. From 2002 (the first full year for which the data are available) through 2008, the ratio of base-funded service dollars provided to MA enrollees to HealthChoices service dollars provided to MA enrollees remained essentially constant at ½ of one percent of HealthChoices spending. Based on Allegheny County data, the constant and tiny relative ratio in spending indicates strongly that shifting cost into base-funding does not explain the spending trajectory for the HealthChoices program. This result, though limited in scope, is supported by the general perceptions of those participating in HealthChoices that base-funded services are small relative to Medicaid and that a small proportion of these services go to Medicaid-eligible persons.

The second possible avenue for cost shifting from the behavioral HealthChoices program is into behavioral pharmaceuticals. Behavioral HealthChoices includes all

behavioral services, but not any pharmaceuticals, which are paid for by the HealthChoices physical health plans. The modest growth rate in behavioral services could have been dampened by shifting patients to treatment with pharmaceuticals rather than treatment services. Since HealthChoices programs maintain separate provider networks for behavioral and physical health, a significant part of behavioral pharmaceuticals are prescribed by PCPs not in the behavioral network. Mark, et. al. found in a recent study that general practitioners prescribed 59% of psychotropic medications, including 65% of anxiolytics, 62% of anti-depressants, 52% of stimulants, 37% of anti-psychotics, and 22% of anti-mania medications.[10] For there to be an intentional cost-shift from the behavioral program to behavioral pharmaceuticals would require an incentive to do so. Much of the behavioral drug spending is being prescribed by providers not in the behavioral network and so not susceptible to the capitation incentives of the behavioral program. Furthermore, behavioral HealthChoices programs pay their contracted providers almost universally on a fee-for-service basis, which provides an incentive for increasing behavioral service use rather than cost shifting. While the insurance program may have a theoretical incentive to shift costs due to its capitated payments, any incentive to shift toward pharmaceuticals has not been passed down to the providers.

It is also possible that behavioral services grew slowly simply due to technological substitution of drug treatments for services as new pharmaceuticals became available, rather than by intent. Frank, McGuire, and Goldman (op. cit.) found that behavioral pharmaceuticals grew very rapidly over the 1996-2006 period in Medicaid populations, while spending on inpatient mental health services declined and other mental health services grew slowly[11]. Data available to confirm whether a shift to behavioral pharmaceuticals occurred or not in Pennsylvania is limited; however, data were available to analyze trend rates in HealthChoices pharmaceutical spending for Community Care Behavioral Health legacy counties for the 2007-2009 period.[12] During this period behavioral drug spending increased at an annual rate of 5.3%, and anti-psychotics, which are much more likely to be prescribed by psychiatrists in the behavioral network, grew at an annual rate of only 1.2%. Given the lack of incentive for providers to shift costs away from services, and the lack of evidence in the limited data available, the analysis did not find support for a cost shift to pharmaceuticals.

Because the various validations describe above support the assumptions used in a manner which makes them appear conservative, the $4 Billon estimated savings figure is a

conservative estimate. Actual savings estimates of $5 Billion or higher could be defensibly calculated from historical data.

ACCESS AND QUALITY As noted, some prior studies have found issues with access and/or quality in Medicaid behavioral carve-out programs. Exhibit 3 displays the results for Pennsylvania DPW's access and quality measures, which with one exception each, have improved by large percentages over the program's history.

Exhibit 3
Percent Change in HealthChoices Performance Measure Between 2003 and 2008*

Access Performance Indicators (Penetration Rate)	SE	SW	LC	All
PI #1a, SMI and No Substance Abuse, Ages 18-64	40%	60%	75%	52%
PI #1b, SMI and Substance Abuse, Ages 18-64	50%	100%	100%	65%
PI #2.1, Mental Health Service, Ages 18-64, African American	25%	45%	36%	33%
PI #2.2, Substance Abuse Service, Ages 13-17, African American	0%	100%	0%	41%
PI #2.3, Substance Abuse Service, Ages 18-64, African American	20%	29%	50%	27%
PI #2.4, Mental Health Service, Ages 18-64	42%	58%	44%	46%
PI #2.5, Substance Abuse Service, Ages 13-17	0%	0%	0%	-1%
PI #2.6, Substance Abuse Service Ages 18-64	14%	80%	25%	30%

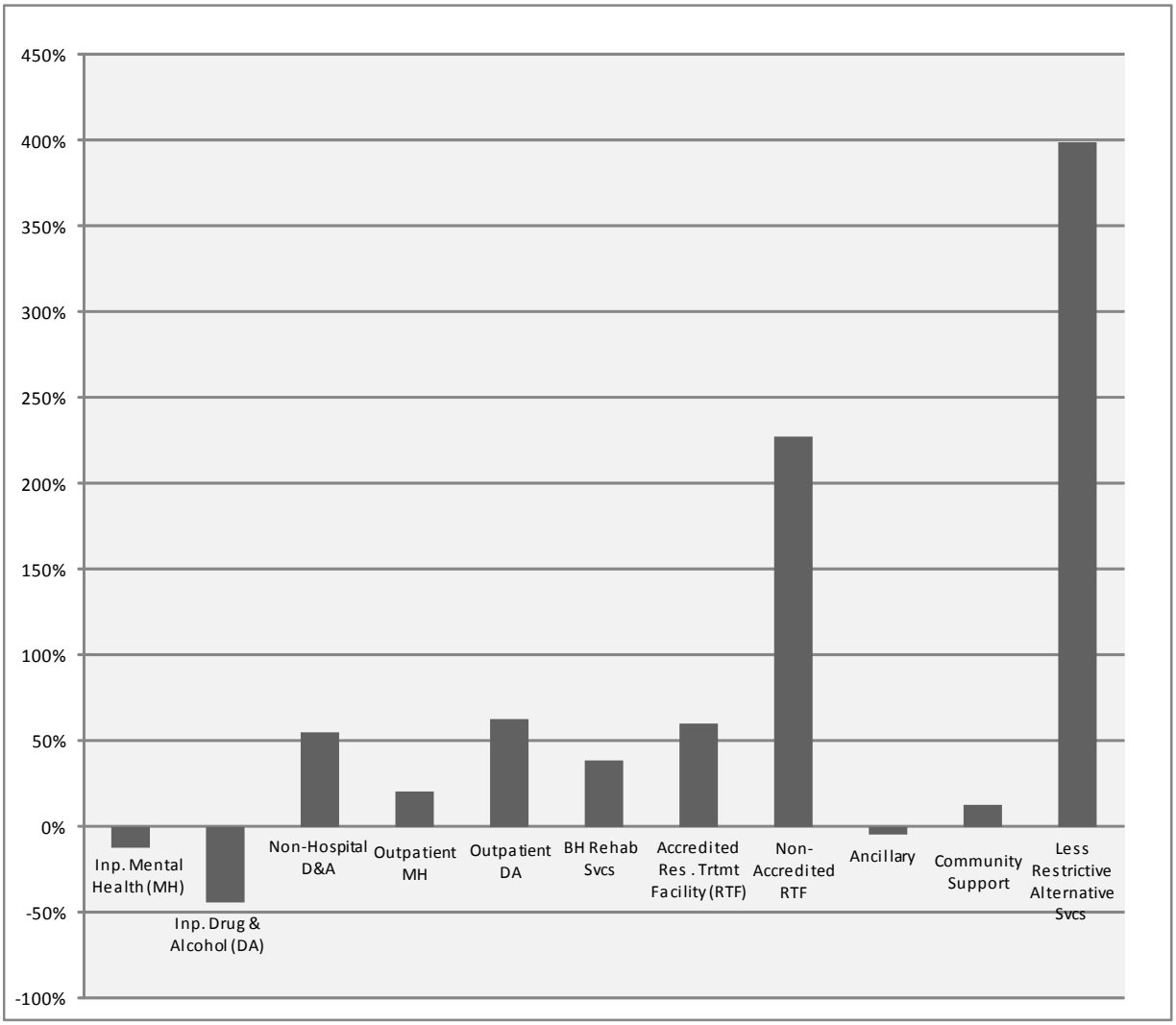
Quality/Process Performance Indicators	SE	SW	LC	All
PI #3a, At Least One Day in a Residential Treatment Facility, Under Age 21, Mental Health	67%	0%	0%	35%
PI #3b, Cumulative RTF Bed Days 120 or Greater, Under Age 21, Mental Health	0%	0%	0%	1%
PI #4a, Psychiatric Inpatient Readmitted Within 30 Days Post-Discharge, Under Age 21	7%	7%	0%	5%
PI #4b, Psychiatric Inpatient Readmitted Within 30 Days Post-Discharge, Ages 21-64	11%	15%	13%	12%
PI #4c, Psychiatric Inpatient Readmitted Within 30 Days Post-Discharge, Ages 65+				
PI #5a, Discharged from RTF With Follow-Up Service(s) Within 7 Days Post-Discharge	-13%	-6%	28%	-3%
PI #5b, Discharged From Psychiatric Inpatient With Follow-Up Service(s) Within 7 Days Post-Discharge, Under Age 21	26%	13%	13%	19%
PI #5c, Discharged From Psychiatric Inpatient With Follow-Up Service(s) Within 7 Days Post-Discharge, Ages 21-64	34%	15%	22%	20%
PI #5d, Discharged From Psychiatric Inpatient With Follow-Up Service(s) Within 7 Days Post-Discharge, Ages 65+	NC	NC	NC	NC
PI #5e, Discharged From Non-Hospital Residential Detox, Rehabilitation and Halfway House Services for D&A Dependency or Addiction with Follow-Up Services Within 7 Days Post-Discharge, Under Age 65	13%	-7%	30%	9%

*Note: Penetration rate is the proportion of members accessing service during the year.
Percentages shown are the percentage increase in the penetration rate.

The eight access measures increased between 27% and 65%, with the exception of drug and alcohol services for 13-17 year olds, which decreased by 1%. The eight quality assessments measured increased between 1% and 35%, with the exception of follow-up to residential treatment facility discharge within 7 days, which declined 3%.

Exhibit 4 displays more detailed service level increases in penetration (users of service divided by average membership), which can be calculated from the more detailed data made available by Community Care Behavioral Health. Of particular note is the reduction in inpatient service for both mental health (-13%) and substance abuse (-44%), and the large growth in alternative less-restrictive services that the Medicaid waiver allows (400% since the second contract year). A separate calculation of overall growth in penetration for the SSI population over the same time frame shows an increase of over 25%, ameliorating the concerns about access to care for more vulnerable populations under managed care.

Exhibit 4
Percent Change in Penetration Rate by Service Category between Contract Years 2 and 9
Community Care Behavioral Health



Source: Community Care Behavioral Health Organization paid claims for Allegheny, Adams, York, and Berks Counties paid through June 20

Discussion

Despite caring for a population with a very high prevalence of behavioral illnesses, the Pennsylvania Behavioral HealthChoices program has demonstrated reductions in cost growth while

improving almost all access and quality measures tracked by the Commonwealth. Several features distinguish the program's design. First, the programs are managed by the county behavioral health authorities, in partnership with Pennsylvania-based managed care entities in a de-centralized relationship with the Commonwealth. The strong understanding of the system and shared values of these parties has allowed the historical strengths of the system to be a foundation for improved rationality of resource allocation and coordination. Second, the county entities and their MCO partners have responsibility for the entire Medicaid population in their catchment areas, eliminating adverse selection issues that plagued the prior voluntary "carved in" managed care program. Third, the single management entity brings to bear expertise in public behavioral health issues and allows simplified interface with juvenile justice, children and youth services, and other human service systems accessed by the Medicaid population.

NOTES

[1] Some highly vulnerable sub-populations were excluded from managed care but the vast majority of eligible Medicaid recipients were enrolled in HealthChoices.
[2] McCoy CR, Stark K. An HMO finds lots of money in poverty. The Philadelphia Inquirer. 1997 AUGUST 3:A01.
[3] Frank RG, Garfield RL. Managed behavioral health care carve-outs: past performance and future prospects. Annu. Rev. Public Health 2007;28:303-320.
[4] Commonwealth of Pennsylvania Department of Public Welfare, Office of Mental Health and Substance Abuse Services. HealthChoices Behavioral Health performance report 2009. Dec 2009; 1-152.
[5] The applicable administrative percentage was added to the ICSI and state hospital closure estimates; the reinvestment dollars had no administration added.
[6] Commonwealth of Pennsylvania Department of Public Welfare, Office of Mental Health and Substance Abuse Services. HealthChoices Behavioral Health performance report 2009. Dec 2009; 1-152.
[7] Frank RG, McGuire T, Goldman H. Trends in mental health cost growth: an expanded role for management? Health Affairs 28, no. 3 (2009): 649
[8] Due to relatively static provider prices in many Medicaid programs, it may be that indexing Medicaid data with the CPI will tend to over-flatten the resulting Medicaid indexed growth over time. In any case, for our purposes the index was removed and so does not create an issue for the calculations.
[9] On CMS website:
https://www.cms.gov/MedicaidStWaivProgDemoPGI/MWDL/list.asp?intNumPerPage=all&sortByDID=4a&submit=Go&filterType=none&filterByDID=%252D99&sortOrder=ascending&submit=Go
[10] Mark TL, Levit KR, Buck JL. Psychotropic drug prescriptions by medical speciality. Psychiatric Services 2009; 60, 1167.
[11] Frank, McGuire, Goldman, *ibid.*
[12] DPW began making pharmacy data available to plans in 2007.