

# **STRIDES**

## **Four Year Evaluation**

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***January, 2001***

## EXECUTIVE SUMMARY

### BACKGROUND

The STRIDES (Steps Toward Reaching Independence, Dignity, Empowerment and Success) program is a collaborative effort of Alameda County Behavioral Health Care and Telecare Corporation to provide more *cost-effective* care for a group of clients who have major functional impairments due to severe and persistent mental illness. By cost effective we mean costs are significantly lower and quality of life and other clinical outcomes are *at least* “equivalent.” This report summarizes evaluation results over the first four years of the STRIDES program.

- Study participants were randomly chosen in December of 1994. January through April of 1995 was a non-capitated start-up period for the STRIDES program. The four capitated years began May first, 1995 and continued through April 30, 1999. Thus, “Year One” refers to the period May 1, 1995 – April 30, 1996.
- The STRIDES program is an Assertive Community Treatment model, with ancillary substance abuse and vocational services built-in. It initially served 30 clients (on whom the evaluation focuses) but was expanded to 100 in the second year. Alameda County paid Telecare a capitated amount for STRIDES members rather than paying for services on a fee for service basis. Analysis using the Community Program Philosophy Scale showed the STRIDES program to have been faithful to the ACT model over the four years.
- The study population was chosen from among December 1995 residents at a locked subacute facility who were also on a list of the top 500 highest cost clients to the county over the prior three year period. The 30 study clients and a comparison group of 30 were randomly assigned. The comparison group was subject to normal criteria and procedures for discharge and, upon discharge, received the “usual” services provided through the County. That is, the comparison group was treated exactly as the STRIDES clients would have been absent the pilot program.
- Services for the clients in the pilot project had averaged \$70,000 during the year before the pilot began. The capitation agreement limited costs to \$26,000 in the first year, with a risk-sharing agreement between Telecare and Alameda County for inpatient (acute, subacute or emergency room) services. In subsequent years, the capitation rate was lowered by including the first \$5,000 of inpatient services in the \$26,000 capitation agreement. Details of the capitation agreement changed from year to year.
- The evaluation measures also changed from year to year although gross and net costs were compared for the two groups in each year. In year one a client survey was administered by an independent research assistant. In year two care takers were surveyed and the Multnomah Community Abilities Scale was rated for clients. In year four the Multnomah scale was repeated. Detailed first year results were published in a report and in a peer reviewed article.<sup>1</sup> Second year results were published in a report.<sup>2</sup> Both reports are available from co-author Gary Spicer. This report summarizes the previous findings and extends the study period an additional two years so that a full four years are included.

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<sup>1</sup> Chandler, D., Spicer, G., Wagner, M., & Hargreaves, W. (1999). Cost-Effectiveness of a Capitated Assertive Community Treatment Program. *Psychiatric Rehabilitation Journal*, 22(4), 327-336.

<sup>2</sup> Chandler, D., & Spicer, G. (1998). *STRIDES Year Two Evaluation*. Oakland: Alameda County Behavioral Health Care Services & Telecare Corporation.

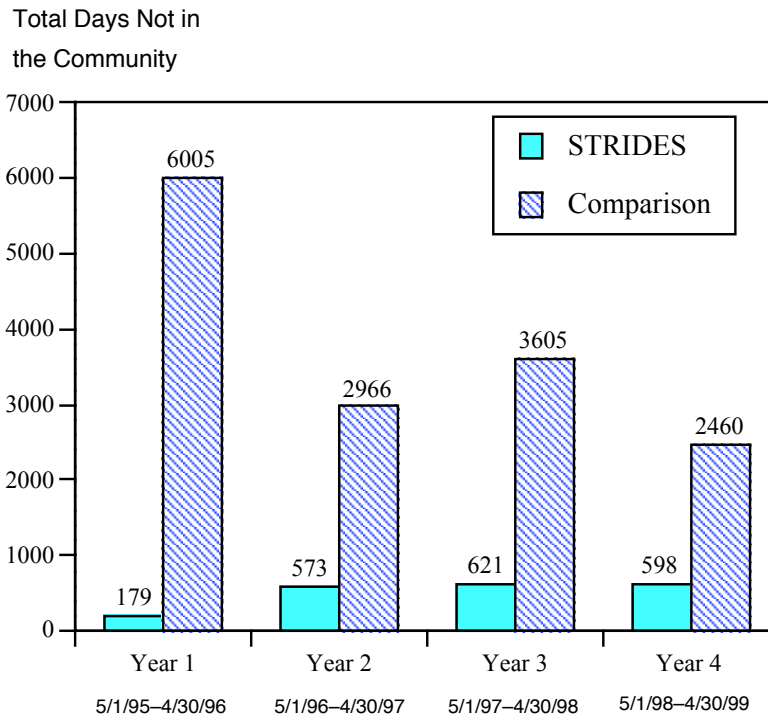
## RESULTS

### ISSUE 1: COMMUNITY TENURE. Did intensive supports for STRIDES clients over time enable them to enjoy more time in the community than did comparison clients?

#### Findings

- All of the demonstration clients left the hospital within 120 days while one comparison client remained in the facility at the end of the four year study period. At the end of the first capitated year, seven comparison clients remained in the facility. Comparison clients used 13,129 locked subacute days during the four study years while STRIDES clients used 1,192.
- Over four years, comparison clients spent over seven times as many days as STRIDES clients in institutions rather than in the community. Conversely, during the four year period, STRIDES clients averaged 29 days a month (out of 30.4) in the community in contrast to the 19 days average of the comparison clients.
- Over the four years, STRIDES clients used 667 acute psychiatric inpatient days and comparison clients 1173 acute inpatient days, even though STRIDES members were at greater risk due to more time in the community.

#### Institutional days in four study years, by study group



**ISSUE 2: ADEQUACY OF SERVICES. Did the ACT model of service provision counter any negative incentives inherent in capitation and produce a high level of community services of high quality?**

**Findings**

1. STRIDES clients in general received many more community-based services than did comparison clients
  - STRIDES clients received far more medications support services per client than did comparison clients.
  - STRIDES clients received far more outpatient/case management hours of contact than did comparison clients
  - After the first year, STRIDES clients used about the same amount of crisis stabilization and psychiatric emergency room services as did comparison clients.
  - Comparison clients received more day treatment services than did STRIDES clients.
2. Services to STRIDES clients were much more evenly distributed between clients than were services to comparison clients—a few of whom received most of the community-based resources. For example, 80 percent of STRIDES clients received on average nine or more hours of ambulatory services per month compared to 25 percent of comparison clients.

**ISSUE 3: COMMUNITY FUNCTIONING. Were the intensive community-based services more effective in improving client functioning in the community?**

**Findings**

- A small number of STRIDES study group members have worked for pay and many more have participated in volunteer work or vocational training.
- Functional ratings for STRIDES and comparison clients were similar and quite low. Over time, community functioning as shown on the Multnomah scale for STRIDES members improved to a statistically significant degree but was probably not clinically important.
- Overall, while STRIDES members appear to enjoy many greater opportunities for (structured) social life and employment and are more likely to receive assistance with substance abuse issues, their overall level of functioning in the community appears very similar to that of comparison clients and their improvement over time appears relatively limited.

**ISSUE 4: COST-SAVINGS OVER TIME. Did capitation lead to significant cost reductions for the STRIDES clients both in the short run and over time?**

**Findings**

“Cost” mean here the agreed-upon price paid for mental health services, whether through payment for a “unit of service” or a capitated payment per-person-per-year. Costs in this report are classed as “gross” or “net.” “Net costs” are the costs

to the county for providing the service; these costs are paid from funds the county controls directly.<sup>3</sup> “Gross costs” are the net county costs plus the costs billed to the federal government through the Medi-Cal match. “Costs,” as used here, correspond to the way costs are used in service planning in a county mental health agency. They are not the same as the “costs” used by economists.

**Gross and Net Costs Per Client Over Four Years**

	Comparison Costs		STRIDES Costs	
	Gross	Net	Gross	Net
Study Year 1	\$42,610	\$39,721	\$30,410	\$12,677
Study Year 2	\$41,021	\$31,057	\$25,372	\$12,943
Study Year 3	\$46,342	\$35,781	\$26,269	\$13,297

The STRIDES program produced very substantial cost saving over the four years: \$2,151,024 in net cost savings and \$1,443,092 in gross cost savings.<sup>4</sup>

**SUMMARY**

A capitated program is cost-effective if costs are significantly lower and quality of life and other clinical outcomes are *at least* “equivalent.” Over the four years of the project we have evaluated, the STRIDES program was clearly cost-effective. It provided a broad range of intensive community-based services at considerably less money than required by the comparison clients. Although there may be differences in quality of life that we were unable to measure, the multiple measures of community functioning used over the four years lead us to conclude that actual functioning levels were similar for the clients in both groups who were not institutionalized. It is important to recognize, however, that *far* more comparison client days than STRIDES client days were spent in institutions—even in the fourth year.

Aside from the general conclusion that overall and in each of the four years the STRIDES program was cost-effective for this group of high utilizing clients, there are several other important conclusions to be drawn.

First, from the standpoint of system management, the program demonstrated it is possible to save money by identifying and providing special services to very high service utilizers. While a regression to the mean occurs naturally for such groups,<sup>5</sup> the capitated ACT-program intervention did result in very substantial costs savings as well as a reduction in the use of locked facilities that are at a premium in public mental health systems.

The evidence in this study, which must be considered preliminary, is that even among a highly selected group such as the STRIDES and comparison group members, a small minority of

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<sup>3</sup> Primarily the Short-Doyle allocation to the county and potentially from county general funds as overmatch.

<sup>4</sup> These four year savings are not adjusted for cost of living increases.

<sup>5</sup> Some analysts question the ability to predict high service utilizers due to the strong regression to the mean effect. It is important in doing so to use a multi-year base period, as did Alameda County.

members use a majority of services. Thus, the principle that a minority of clients consume a majority of resources holds true even among the highest utilizers of service.

From at least one perspective, the treatment provided through the locked subacute facility and County outpatient teams was also successful. Institutionalization was not permanent: 55 percent of comparison clients left the facility within a year and 86 percent moved to community based care within two years.

Though lower than the baseline costs, services were not inexpensive for either group. Even in the fourth year gross costs for both groups exceeded \$25,000 per year—far in excess of the average for adults with severe mental illness in Alameda County.

Very few studies have tested the ACT program model over four years using a randomized study design. Several of our findings are quite important in this context:

- STRIDES clients used less acute inpatient service per month at risk and most clients used few or no days. Since reduction in acute inpatient days is the primary goal (and measure) in most ACT studies this is noteworthy.
- As in several other studies of ACT, quality of life and functional goals were achieved to only a limited degree—at least in the first two years when our measures were more adequate. This conclusion was true regardless of whether we asked the clients, their case managers or a caretaker.
- Substance abuse was not an immediate focus of service when STRIDES started up. However, when detailed assessments were made in the second year, about 70 percent of the STRIDES clients (all 100, not just the 30 study clients) had substance abuse histories. As recommended in some other studies, substance abuse treatment needs to be an integral part of an ACT program.<sup>6</sup>

It is possible to identify clients who can be transitioned to less intensive services over time (the Step Up program at STRIDES). Since early findings led to the conclusion that ACT services needed to continue “for life,” this is an important confirmation of a few other studies.<sup>7</sup>

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<sup>6</sup> Drake, R. E., Alterman, A. I., & Rosenberg, S. R. (1993). Detection of substance use disorders in severely mentally ill patients. *Community Ment Health J*, 29(2), 175-192; discussion 193-174; Drake, R. E., Bartels, S. J., Teague, G. B., Noordsy, D. L., & Clark, R. E. (1993). Treatment of substance abuse in severely mentally ill patients. *J Nerv Ment Dis*, 181(10), 606-611.

<sup>7</sup> See Salyers, M. P., Masterton, T. W., Fekete, D. M., Picone, J. J., & Bond, G. R. (1998). Transferring clients from intensive case management: impact on client functioning. *Am J Orthopsychiatry*, 68(2), 233-245.