AB 3777 SYSTEM REFORMS:

THE VENTURA MODEL

A Summary Report To

The California

Department of Mental Health

October 1995

Lewin-VHI, Inc.

with

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Acknowledgment

We are grateful to the clients who participated in the study, to members of the Ventura County Mental Health program, and to the California Department of Mental Health AB 3777 project staff for their contributions to this evaluation. A full set of acknowledgments is in the October 1995 Final Report to the Department.

APPENDICES

CHAPTER ONE

INTRODUCTION AND BACKGROUND

The Ventura model for adults and older adults grew out of the successful Ventura model for children.

The Wright, McCorquodale and Bronzan Act of 1988 (AB 3777) established two types of demonstration projects: a County Interagency Demonstration (CID) and Integrated Service Agencies (ISAs). The CID model was designed to demonstrate that a *county-wide* system could be reformed to better meet the needs of adults and older adults with serious and persistent mental illness. In contrast, the ISAs were small, self-contained, community-based agencies.[1] The CID model, as originally conceived, was a set of principles for planning and monitoring services for a target population. The model was based on the successful children's service model (AB 377) pioneered by Ventura County that targeted services to the children most in need, built strong interagency collaborations, and used objective outcomes and cost information to evaluate and manage the system.

AB 3777 required an RFP process to select the county CID demonstration site. Ventura was selected and received roughly $4 million a year in supplementary funds. Because the model was both designed and implemented by Ventura County we refer to it as the "Ventura model."

The Ventura model embodies comprehensive reforms of a county-based mental health system.

The implementation of the Ventura model was heavily influenced both by the treatment orientation of the entire AB 3777 initiative and by the clinical leadership in Ventura. The basic components of the Ventura system as implemented include the following:

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[1]Meisel, Joan, Daniel Chandler, Michelle McGowen, and Kristin Madison. AB 3777 System Reforms: Summary Report on The Integrated Service Agency Model. California Department of Mental Health, August 1995.

- Systematically controlling access to the system based on a defined target population.

- Transforming a countywide system of clinical services (outpatient, day treatment, inpatient) into a system in which the locus of responsibility for client services rest with a geographically specific multi-disciplinary team.

- Shifting an entire county system from a clinical services orientation to a system that helps clients achieve their rehabilitative goals.

- Using client-outcomes, generally measured in terms of functional status and abilities rather than clinical symptoms, as a means for assessing system success and for assisting in system management.

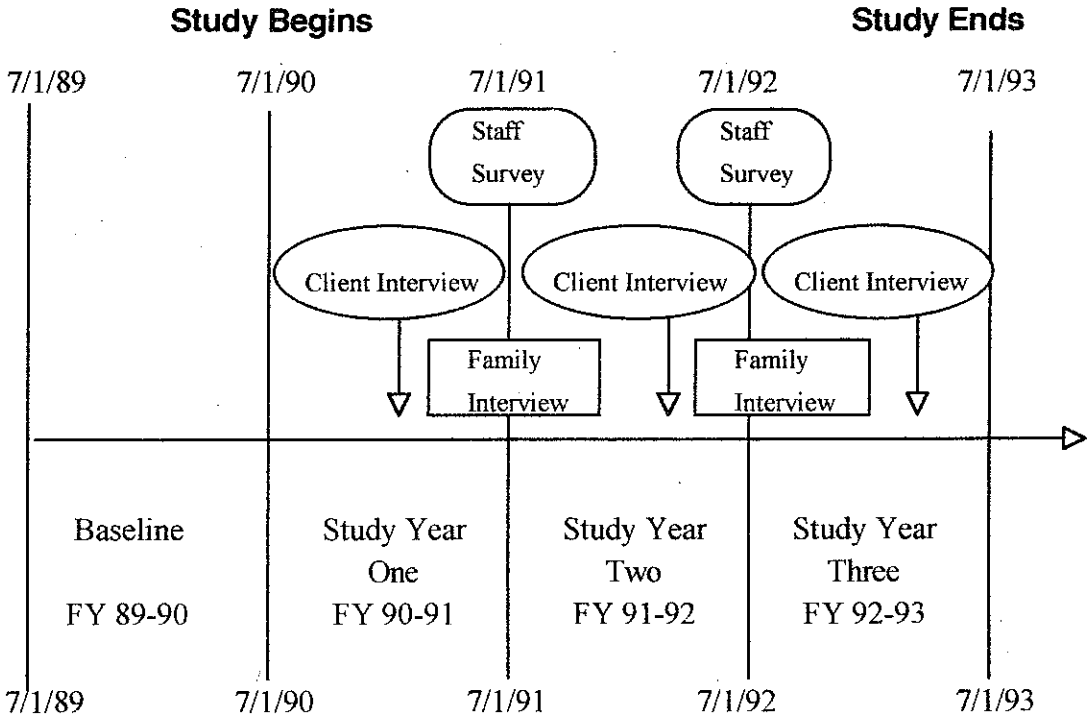
- Integrating mental health services with those of other agencies to better serve clients who are in the criminal justice system, who are homeless, or who have both a mental disorder and a substance abuse problem.

The Ventura model did not include the financing reform (consolidation of all funding sources into a capitated rate) that was part of the ISA model.

Lewin-VHI conducted an independent evaluation of the Ventura model.

Lewin-VHI was retained to conduct the independent evaluation mandated by AB 3777. The basic study design used a random sample of 100 Ventura long-term clients assigned to adult and older adult teams. *Unless specifically stated, all results in this report refer to this sample, not the entire population of Ventura clients.* Change in these clients was compared with change in a sample of 113 clients randomly selected from the long-term clients in four California comparison counties. While the two groups can be compared directly, a more important function of the comparison group is to help us understand whether change in Ventura is attributable to the AB 3777 reforms or whether similar change occurred in the "usual system" represented by the comparison counties.

Figure 1: Study Timelines



- Round One *client interviews* took place eight to ten months after each client's study enrollment date; Round Two and Round Three occurred one and two years later, respectively. The midpoint of the interviews in each year was February.
- *Family interviews* followed client interviews and occurred in roughly the same sequence.
- *Staff surveys* took place in September of the second and third study years.
- *Objective data* from state and local data banks were analyzed by fiscal year. These data were also available for the baseline year before the study began.

Data came from various state and local data bases and from three face-to-face client interviews, two family interviews, and two staff surveys (please see Figure 1). A brief description of the study methodology and data sources is in Appendix A. Major findings are shown in exhibits in the text; other reference tables are contained in Appendix B.

Although changes were in process during the 1989-90 fiscal year, the official start of the Ventura program was October of 1990 when the traditional clinic-based organization of services was phased out and on-going clients were assigned to the geographical teams. During the study period the Ventura model, as embodied in the Ventura mental health system, was in constant change and development. The development and implementation of the model during the first two years as well as detailed three year outcomes are described in Lewin's earlier reports.[2]

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[2]Meisel J, Chandler D: AB 3777 Demonstration Projects for the Seriously Mentally Ill: Report on Implementation. Report to California Department of Mental Health. Sacramento, January, 1992

Meisel J, Chandler D, McGowen M: Evaluation of AB 3777 Client and Cost Outcomes: July 1990 through March 1992. California Department of Mental Health, March, 1993

McGowen, M., Meisel, J., Chandler, D., AB 3777 Final Report: The Ventura Model. Report to California Department of Mental Health. Sacramento. October 1995

The final report covers three year outcomes and costs; service design and delivery are discussed in detail in the first two reports. All three reports are available from the California Department of Mental Health, 1600 Ninth Street, Sacramento, CA 95814.

CHAPTER TWO

FINDINGS[3]

SUMMARY OF FINDINGS

FINDING 1: ***THE VENTURA MODEL IS AN IMPROVED COUNTY SERVICE SYSTEM FOR PERSONS WITH A SERIOUS MENTAL ILLNESS***

FINDING 2: ***BOTH VENTURA AND COMPARISON SAMPLES IMPROVED SIGNIFICANTLY ON A WIDE RANGE OF CLIENT OUTCOME MEASURES.***

FINDING 3: ***VENTURA FAMILIES PERCEIVED AN IMPROVED QUALITY OF LIFE FOR THEIR RELATIVES.***

FINDING 4: ***COST-AVOIDANCES AND MONETARY BENEFITS IN VENTURA DID NOT OFF-SET MENTAL HEALTH EXPENDITURES.***

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3 As is standard practice, we have used tests of statistical significance to determine which differences over time or between the demonstration and comparison groups are unlikely to be due to chance. Note that "statistically significant" in this report refers to results with only a ten percent (or less) likelihood of having occurred due to chance: $p \leq 0.10$. Please see Appendix A for more detail.

FINDING 1: THE VENTURA MODEL IS AN IMPROVED COUNTY SERVICE SYSTEM FOR PERSONS WITH A SERIOUS MENTAL ILLNESS.

The system reforms embodied in the Ventura model — regional teams with resource allocation responsibility, close coordination of regional and specialist services, interagency collaboration, and a focus on measuring concrete changes in client lives — were intended to produce a change in the client's experience of mental health services. Rather than a narrow focus on symptom relief, teams could make individualized plans with clients around rehabilitation goals. Rather than fragmented services, clients would experience a seamless and continuous caring with the team as facilitator and contact point. With some caveats, discussed in Chapter III below, the system *is* an improvement on the traditional county organization of clinic-based services plus case management.

Although the overall levels of satisfaction with services were not different for Ventura and comparison clients, the system reform paid off for clients and their families in several ways. Ventura clients reported improvements over time in the amount of control they had over their own treatment and in the percentage of staff of their own ethnicity. Families' satisfaction with services received by the client increased over time, and families perceived significantly improved continuity of care.

Team staff were highly favorable regarding the team-based regional model of services. Team-based staff in general showed improvements in morale over time, although very low satisfaction characterized a small number of teams throughout the study period. Team variations in treatment philosophy and operation were consonant with the needs of the populations served in different geographic regions.

Ventura clients were more likely than comparison clients to receive rehabilitative services, broadly defined to include case management (please see Table 1). For example, only 18 percent of Ventura sample clients received no rehabilitation services compared to 48 percent of pooled comparison sample clients. However, the specifically rehabilitative services of employment and socialization still comprised a very small

percentage of overall resources. For example, in the second study year only 8 percent of the Ventura sample resources were devoted to these two services.

Continuity of care was improved considerably by the team model, especially for clients who were arrested or needed hospitalization. Mobile crisis team staff as well as hospital and jail staff had timely contact with team staff when they encountered a team client, permitting development of plans based on up-to-date and comprehensive information about the client.

Table 1:

Clients receiving zero, one, two or three or more rehabilitative services during the study year (vocational, socialization, residential, case management)

	Ventura		Comparison	
	N	%	N	%
Study Year One				
No rehab services	19	20.0	53	49.5
One rehab service	47	49.5	37	34.6
Two rehab services	23	24.2	9	8.4
Three or more	6	6.3	8	7.5
Significance	Chi-square =23.03 3df p≤0.0001			
Study Year Two				
No rehab services	17	18.3	50	47.6
One rehab service	38	40.9	36	34.3
Two rehab services	32	34.4	13	12.4
Three or more	6	6.4	6	5.7
Significance	Chi-square = 23.69 3df p<0.0001			
Study Year Three				
No rehab services	15	17.2	43	43.0
One rehab service	49	56.3	37	37.0
Two rehab services	19	21.8	12	12.0
Three or more	4.	4.6	8	8.0
Significance	Chi-square = 17.29 3df p=0.0006			

FINDING 2: BOTH VENTURA AND COMPARISON SAMPLES IMPROVED SIGNIFICANTLY ON A WIDE RANGE OF OUTCOME MEASURES.

Figure 2 is a summary of client outcomes for both the Ventura and comparison client samples. Note the figure cannot be compared to the similar figures in the summary report on the Integrated Service Agencies.[4] There a check mark means the demonstration group result is significantly more positive than the comparison group. **Here a positive, neutral or negative sign refers to the amount of change over time *within* the Ventura group or the pooled comparison group.** The text does, however, note when differences between the Ventura and the pooled comparison group are statistically significant.

HOSPITALIZATION.

Acute hospital admission rates changed relatively little during the demonstration. but Ventura significantly reduced its average length of stay.

Although there were county-by-county differences among the comparison counties, as Figure 3 shows, the overall pattern is clear. With the exception of County B, where there was a considerable decrease from baseline to year one, acute hospital admissions remained stable for both the Ventura and the comparison samples, and the rates between Ventura and the pooled comparison group did not differ significantly in the baseline or in the study years.

[4] op cit.

Figure 2:
Summary of Outcomes by Domain

Summary of Ventura and Comparison Sample Client Outcome Results by Domain: Positive or negative change over time		
Outcome Domain	**Ventura Sample**	**Pooled Comparison Sample**
24 Hour Acute Care		
Admissions	0	0
Length of stay	+	0
24 Hour Long-term Care	–	–
24 Hour Acute+Long-term Costs	+ –	+ –
Negative Impacts		
Homelessness	+	+
Arrests	+	0
Housing		
Independent Living	0	0
Satisfaction	+	+
Receive Support	+	+
Employment	+	+
Income	+	+
Physical Health	+	0
Family, Friends, Fun	**Mixed pattern**	**Mixed pattern**
Well-Being	Please see Figure 3	Please see Figure 3

Legend: + Positive change — Negative change

0 = No significant change + – Positive followed by a negative change

As shown in Figure 4, Ventura was successful in significantly reducing its average length of stay from the baseline to the first study year. This reduction resulted in a significantly lower expenditure on hospital care in the first and second study years than in the baseline.

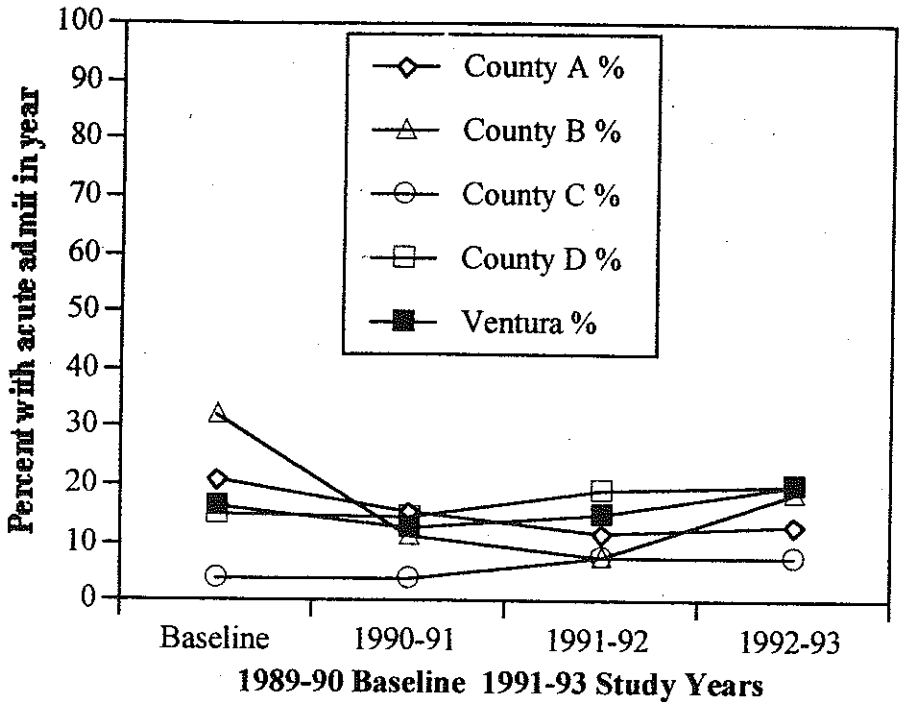
Use of long-term care increased over time for each study group.

Because the initial sampling excluded clients in long-term care at the inception of the study, use of long-term inpatient care was very low in Ventura *and* comparison counties. Long-term care occurs primarily in psychiatric skilled nursing facilities, but can also include days in a non-acute state hospital ward. Virtually the same number (ranging from 2 to 6 percent) of Ventura and pooled comparison county clients used any long-term care days in any given study year. However, the rates for both groups were highest in the third year (Ventura=5.8 percent, pooled comparisons=5.0 percent). The increase from study year one to year three was statistically significant for Ventura and not quite so for the comparison clients.

After a significant decrease from baseline to the first study year, costs for inpatient care increased significantly for both study groups in the third study year.

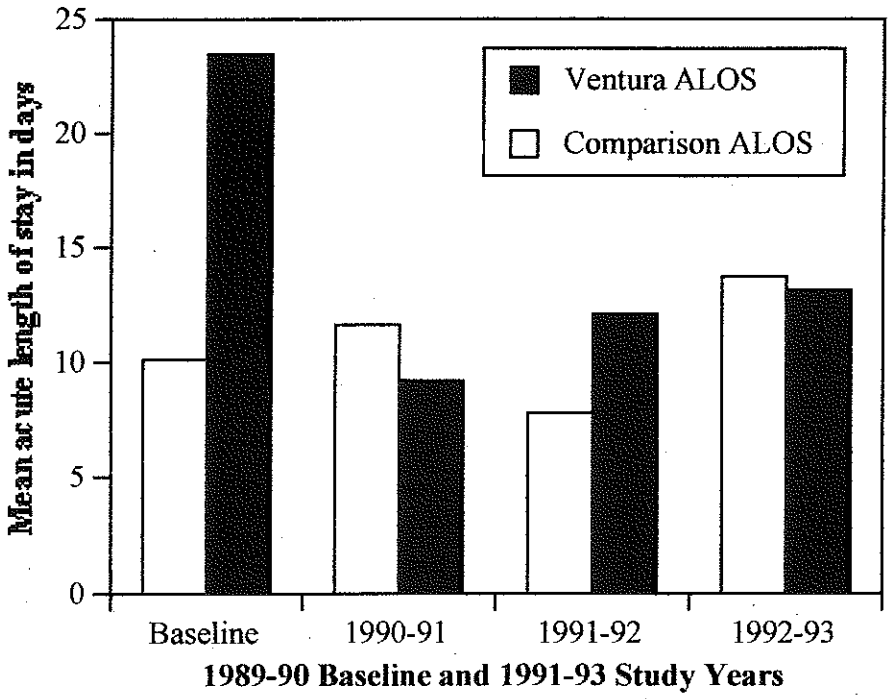
The combined costs for acute and long-term hospitalization are shown in Figure 5. Costs for both study groups *decreased* significantly from baseline to the first study year. But they then increased significantly for both groups from year one to year three. In essence the progress made early on was erased in the third year as the Ventura percentage of total mental health costs attributable to inpatient services went from 20.4 percent in the first study year to 45.1 percent in the third. Comparison costs showed a parallel increase from 26.1 percent of the total in year one to 50.6 percent in year three. Whether this increase is attributable to client changes (due, for example, to the cyclical nature of major mental illnesses) or to system failures is unclear.

Figure 3:
Acute Inpatient Admissions:
Ventura and Four Comparison Samples



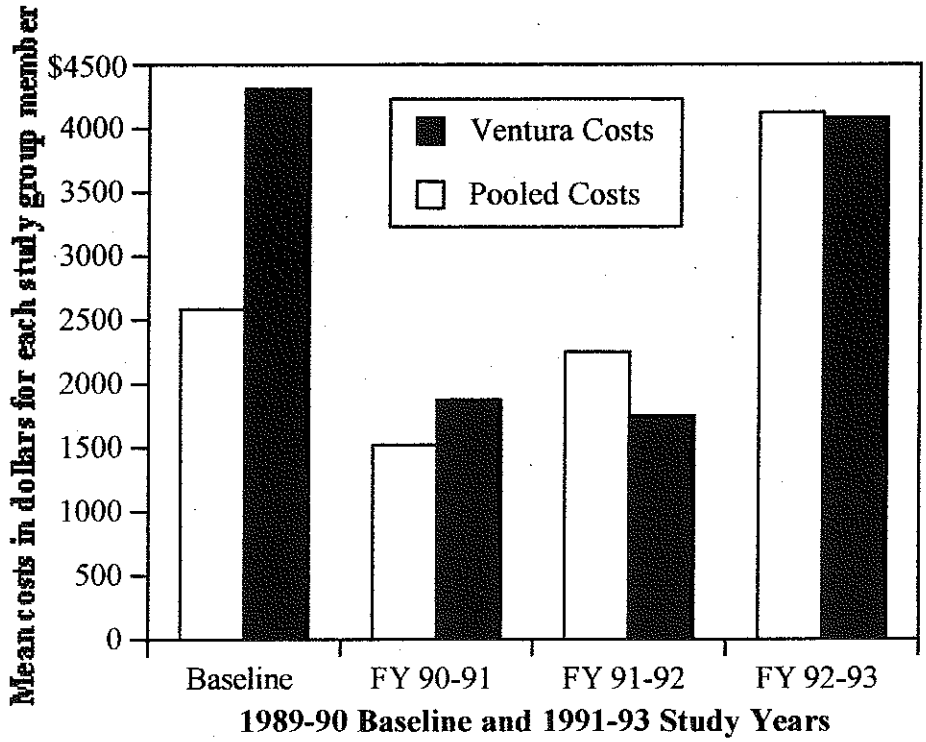
County A %	20.8	15.4	11.5	13
County B %	32	11.1	7.41	18.5
County C %	3.7	3.7	7.41	7.69
County D %	14.8	14.3	19.2	20
Ventura %	16.5	12.6	15.1	20

Figure 4:
Average Length of Acute Hospital Stay:
Pooled Comparison and Ventura



Comparison ALOS	10.1	11.7	7.8	13.7
Ventura ALOS	23.4	9.2	12.1	13.1

Figure 5:
Average Annual Cost per Client for Acute and Long-term Inpatient Care Combined: Ventura and Pooled Comparison Samples



Pooled Costs	$2584	$1527	$2247	$4128
Ventura Costs	$4315	$1880	$1746	$4092

HOMELESSNESS

Both the Ventura and the pooled comparison clients showed a significant reduction from initially low rates to almost zero by the third year.

In our samples, homelessness was measured by asking client interview respondents if they had been homeless even one night during the prior six months. Except for one county in one year, homeless rates in the study samples ranged from zero (most common) to less than 5 percent. The rate in Ventura for the Round One interview was 4.3 percent, with no homeless clients in Round Two and Round Three, a significant difference; the pooled comparison clients also changed significantly, from 6.5 percent to one percent. (See Exhibit 1 in Appendix 2.) Rates this low, however, make it difficult to distinguish chance fluctuations from true trends. Differences each round between the pooled comparison clients and Ventura clients were not statistically significant.

CRIMINAL JUSTICE CONTACTS

Ventura significantly lowered its arrest and conviction rates from year one to year three.

Fewer than 10 percent of clients in either Ventura or the pooled comparison sample were detained by law enforcement in any year. (See Exhibit 2 in Appendix 2.) Rates in the baseline were similar. Rates fluctuated over time with none of the differences between groups being statistically significant.

Limiting the analysis to those present in both years, the change within the Ventura group from 8.0 percent in FY 90-91 to one percent in FY 92-93 is statistically significant.

HOUSING

The distribution of clients in independent, family and group settings changed little for either study group.

The overall percentages of clients living independently did not change much over time for either group (see Exhibit 3 in Appendix B), nor was the percentage of persons moving to more independence greater than the percentage moving to less independence.

Both groups reported more satisfaction with their living situations over time.

Both Ventura and pooled comparison clients' ratings of satisfaction with where they lived improved significantly from Round One to Round Three. And Ventura scores on a scale measuring family irritation with clients living at home improved significantly in the third round; however, in Round One and Two these ratings were significantly worse than comparable ratings among comparison group members living with families.

Ventura clients living independently increasingly reported receiving help in finding housing; both groups received increased living situation support.

Ventura clients living independently were increasingly likely to receive help with finding and choosing a residence from a case manager or treatment team (those helped went from 26 percent in Round One to 41 percent in round Three), while pooled comparison clients were less likely to get such help over time. There was a reduction in both groups from Round One to Round Three in the percent needing help with daily living which was not available

EMPLOYMENT

Ventura clients did somewhat better than comparison clients in trying work when baseline differences were taken into account.

In both study groups, a substantial number of clients who had not worked in the baseline tried work during the three year study period: 17.3 percent for Ventura clients and 18.5 percent for comparison clients. However, 10 comparison clients who had worked in the baseline did not work in the study period. Comparing the change in both directions — from no work to work, and work to no work — Ventura was significantly positive while the comparison client change was not. Most of those trying work in Ventura had bipolar or schizophrenic diagnoses while in comparison counties they were more likely to have other, less serious, diagnoses (Exhibit 4 in Appendix B).

The study groups did not differ on measures of duration of employment or job satisfaction. Nor were wages earned significantly different (Exhibit 5 in Appendix B).

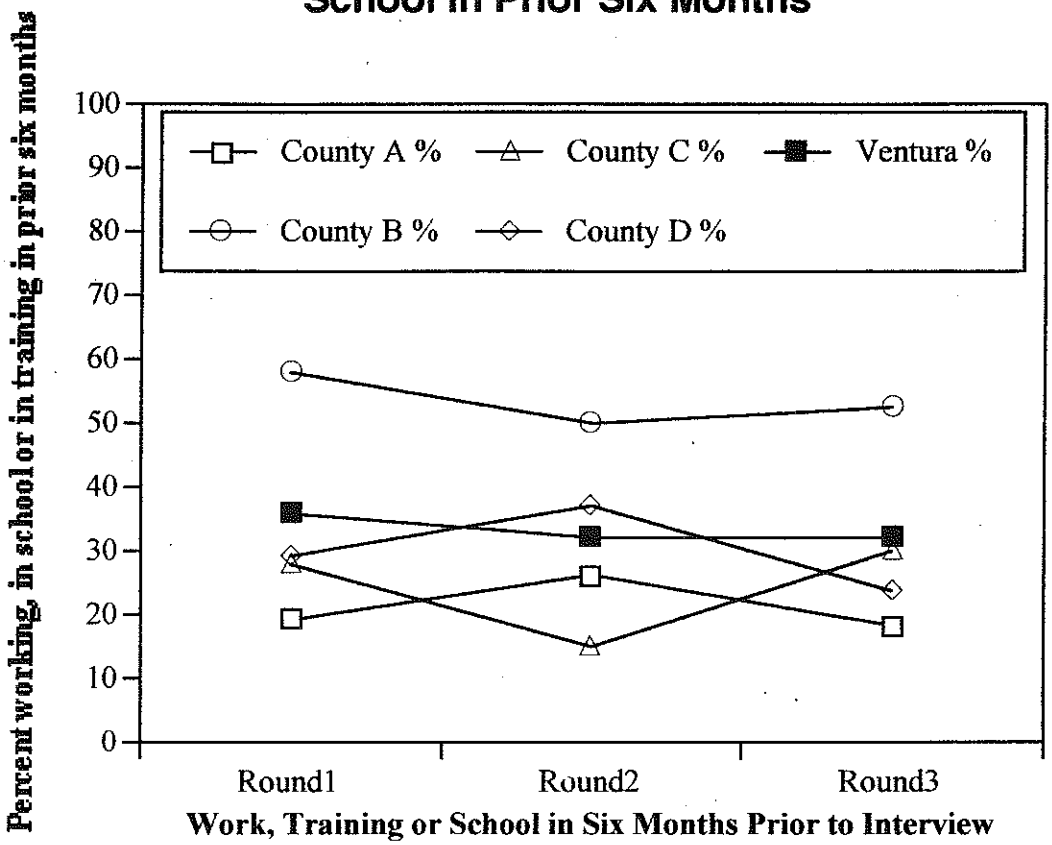
Overall involvement in productive activity—work, training or education—was not significantly different between study groups or over time.

Figure 6 shows the percent of clients in the Ventura sample and the four comparison samples who were engaged in work, training, or education during some part of the six months prior to each interview round. (Those who worked in the baseline and all three study years were excluded.) Ventura clients are roughly in the middle of the counties on this measure and hardly change over time.

The "return on the dollar" in wages earned by Ventura clients in relationship to vocational expenditures may have exceeded that for comparison clients.

Each of the other counties spent proportionately much more per client on vocational services over the three years. However, the Ventura "return on the dollar" when defined as wages earned by those receiving services may have been greater than other counties. County A got no return on the small amount ($3,631) it spent (none of the clients receiving services in the three years earned wages); County B spent $57,858 but clients earned less than this amount in wages; County C's clients cost just about as much ($23,262) as they earned; County D's clients cost $19,806 and earned almost twice that amount. Costs for Ventura's clients were $22,376 and wages were more than four times this amount. These figures are difficult to interpret as they reflect only services billed as vocational, and some of the Ventura employment-related costs were hidden in other service categories such as "case-management." However, the overall pattern is consonant with the fact that Ventura employment expenses were almost all tied directly to clients trying supported work rather than being devoted to vocational training which might not eventuate in jobs.

Figure 6:
Ventura and Comparison Counties:
Percent Who Worked, Trained or Went to School in Prior Six Months*



County A	19.2	26.1	18.2
County B	57.7	50	52.4
County C	27.8	15	30
County D	29.2	36.8	23.5
Ventura	35.7	32.1	32

*** Excluding those working in baseline *and* in all three study years.**

INCOME

In Round One Ventura clients had a less positive financial situation than did comparison clients but they improved significantly over the next two years.

The Ventura sample was somewhat less well-off financially than the pooled comparison sample during the first interview round. Amount of income was close to being significantly lower (Exhibit 6 in Appendix B), and a significantly higher percentage of Ventura clients was a) living under the federal poverty standard, b) reported a sudden drop in income, and c) within the prior two months lacked funds for non-essentials like transportation, snacks and movies.

Over years two and three of the study the Ventura sample made significant improvements so that they no longer differed from the comparison sample on these income measures. The Ventura clients' income increased significantly from Round One to Round Three, while the comparison clients' did not. In addition, the Ventura percent under poverty went down slightly, while it went up for comparison county clients. And the reduction from Round One to Round Three in the percent having experienced a sudden drop in income was significant for Ventura but not for pooled comparison clients. While Ventura did not significantly reduce the percent of clients reporting not having enough for necessities, it did significantly reduce those reporting not having enough for non-essentials. For its part, the pooled comparison group showed a significant reduction in the percent lacking money for essentials (Exhibit 7 in Appendix B).

HEALTH

On a number of measures, the Ventura sample health status and access to health care improved.

Ventura treatment team staff used information from the Personal Profile outcome-monitoring instrument to provide feedback to service team staff regarding client health care needs. This process appears to have paid off; virtually all of the health care indicators we measured showed significant improvement:

- The percent reporting a *regular* source of health care increased (Exhibit 8 in Appendix B).
- The percent reporting major health care problems decreased.

- The percent reporting untreated major health care problems was small and declined over time.

The Ventura sample on the whole showed more improvement than did the comparison sample. However, on most measures, the Round One starting status was poorer for Ventura clients. Thus the improvements noted here often served to raise the Ventura clients to the level at which pooled comparison clients appear to have started.

It is not clear what accounts for the different starting points. Access could have been affected by the way health care services are organized and financed in different communities. Also the larger number of Ventura clients with severe diagnoses may also have affected these service-oriented measures.

FAMILY FRIENDS AND FUN

Measures of family relationships, friendships and fun were mixed.

There were no differences between the Ventura and pooled comparison samples in the number reporting having a friend, in the amount of contact with friends, or in the level of satisfaction with the amount of friendship in their lives, but Ventura clients did report having significantly fewer friends who were not consumers of mental health services. On none of these measures were there significant changes over time within either the Ventura or the comparison groups.

Comparison clients reported participating in significantly more activities (both alone and with others) on average than did Ventura clients, but the groups did not differ on ratings of the amount of fun in their lives.

The amount of contact with family members for those not living with their families was not altered during the study for either group, and there were slight but not significant improvements reported in family relationships for both study groups. Each group had one positive finding in the area of relationship to family. Over time, Ventura clients reported significantly fewer negative emotions and expectations directed toward them by family members; comparison clients living with family had a significantly higher level of satisfaction with family relationships in Round Three than in Round One.

QUALITY OF LIFE

The Ventura sample showed improvement on a variety of quality of life measures.

Figure 7 summarizes the multiple measures of quality of life. Not all of the results are consistent. For example, both Ventura and comparison clients' ratings of their satisfaction with life improved from Round One to Round Three when measured with a single question (Exhibit 11 in Appendix B). When measured with an eight item scale measuring overall quality of life (satisfaction with life in general, friends, family, fun, paid work, health, income and personal safety) there were not significant findings. Likewise, on a four item scale measuring feelings of hope and engagement there were no significant between group or over-time within group differences.

While both Ventura and pooled comparison clients reported fewer symptoms from Round One to Round Three (Exhibit 12 in Appendix B), the interviewer ratings of observable symptoms and client personal appearance favored the Ventura clients (Exhibits 13 and 14 in Appendix B).[5]

The Ventura client ratings on the Rosenberg self-esteem scale improved significantly over time while those of comparison clients did not (Exhibit 15 in Appendix B).

Between Round One and Round Three Ventura clients also significantly decreased the percentage (Exhibit 16 in Appendix B) reporting that they had received too much medication, too many kinds of medication or the wrong kind of medication (Round One=27.4 percent; Round Three=14.7 percent).

Roughly 15 percent of both demonstration and comparison group clients reported having been victim of a crime in each round; nonetheless, comparison clients were significantly more satisfied than Ventura clients with their personal safety in Round One and Round Three.

[5]Although we performed reliability checks using tapes of interviews, there was no way to monitor interview judgments about client appearance and non-verbal behavior. Since Ventura interviewers were more experienced in working with the mentally ill, this finding may in part reflect measurement differences.

Figure 7: Summary of Quality of Life Outcomes

Summary of Ventura and Comparison Sample Client Outcome Results by Domain		
Outcome Domain	**Ventura Sample**	**Pooled Comparison Sample**
Life Satisfaction	+	+
Overall Quality of Life	0	0
Hope and Engagement	0	0
Self-Esteem	+	0
Self-reported Symptoms	+	+
Observed Symptoms	+	0
Fewer Problems with Medications	+	0
Personal Safety	0	+

Legend: + = Positive change — = Negative change 0 = No significant change.

FINDING 3: VENTURA FAMILIES PERCEIVED AN IMPROVED QUALITY OF LIFE FOR THEIR RELATIVES.

While family interview completion rates were low, findings appear to be valid.

Family interviews were conducted in the second and third years of the demonstration. The number of interviews was limited by lack of client and family member consent.[6] In Round One, family members of 34 percent of Ventura clients and 49 percent of comparison clients were interviewed. In Round Two, the figures were 30 percent for Ventura and 36 percent for the comparison group.

Ventura family ratings of client quality of life improved significantly from Round One to Round Two.

Two scales were used to assess family views on the client's quality of life: an eight item scale comparable to one used for clients and a four item scale measuring family hopes for the client's future. The mean for Ventura families increased significantly on both scales from Round One to Round Two (Exhibits 17 and 18 in Appendix B). The Ventura families had lower Round One ratings than the comparison families on both; the improvements brought them up to the same level as the comparison group by the Round Two interview.

Family burden did not decrease for either Ventura families or comparison families.

Architects of AB 3777 hoped that the new service models would relieve families of burdens associated with having a mentally ill relative. The interviews measured reported burden resulting from a) helping with daily living tasks such as grooming or transportation, b) dealing with client behavioral issues such as drinking or suicide threats, c) losing sleep or time on a job due to caring for the relative, and d) experiencing physical

[6]The issue of bias is discussed in detail in the September 1995 Final Report, *op cit.*

or psychological stress related to caring for the relative. There were no significant between group differences or within group changes over time on any of the scales.

Other measures related to family burden were family cost, family time, and family capacity required to cope with issues that arise. Again, on none of these measures was there a significant difference between Ventura families and comparison families, or a significant change over time.

FINDING 4: COST-AVOIDANCES AND MONETARY BENEFITS IN VENTURA DID NOT OFF-SET MENTAL HEALTH EXPENDITURES.

In the Ventura children's services model, the actions of the mental health system resulted in lower costs for other public agencies that served the same clients. The framers of the adult model hoped for the same kind of cost-offset from a reduction in the public costs in other systems used by adult clients, particularly criminal justice and health care.

Average annual physical health expenditures per client in the Ventura sample were higher than for comparison clients in all three study years, significantly so in the third year. These differences between sites are difficult to interpret since average physical health care costs appear to be influenced by a relatively few clients with high expenditures.

As seen in Table 2, average annual criminal justice costs per client were small. So although the Ventura costs decreased from a baseline mean of $371 to a third year mean of $26, savings are not large.

Entitlement costs would not be expected to go down unless wage income replaced the entitlements. That did not occur. Entitlements did not go down in Ventura and the increase in average wages was quite small.

In a well functioning system, housing subsidy costs should go *up* rather than down. For Ventura clients housing subsidies did increase somewhat, though less than for comparison clients and not enough to be a significant part of the overall cost equation.

Other public costs, such as conservatorship, court costs for involuntary treatment, and social service agency expenses, were all very low for both study groups.

Total public expenditures for the Ventura sample (mental health and all other public costs) increased from an average of $17,310 per client in the first study year to $18,562 in the second and $18,562 in the third. (Comparison sample costs went from $15,056 per client to $14,993 to $17,333.) There were no major cost-avoidances or offsets for this random sample of long-term clients.[7]

Savings from reduced inpatient expenditures did not consistently materialize to fund increased rehabilitative services.

One of the major advantages of the children's Ventura model (AB 377) reforms was a reduction in expenditures for the most expensive level of care. Ventura model designers hoped that comparable reductions in the system for adults and older adults would free funds for more rehabilitative services. As discussed in Finding 2, there were reductions in inpatient length of stay during the study period that contributed to a significant decrease in 24-hour costs for the Ventura sample in the first two years of the study; during these years inpatient services represented just 20-23 percent. In the third year the increase in 24-hour care costs resulted in using 46 percent of resources for this level of care—a figure equivalent to the 43 percent in the baseline year. (Please see Table 3 and Table 4.)

[7]Another potential source of cost offsets stems from savings to the county produced by the specialized criminal justice and general assistance diversion programs. We did not measure these savings directly, but they appear to be substantial.

Table 2

Average major public agency costs and wage earnings per client during baseline and three study year+

	Ventura Sample		Pooled Comparison	
	N	Mean Cost	N	Mean Cost
Criminal Justice Costs				
Baseline	91	$371	102	$193
Year One	95	173	107	73*
Year Two	93	235	105	39
Year Three	87	26	100	145
Physical Health Costs				
Baseline	92	2,380	106	870
Year One	98	1,036	112	891
Year Two	96	2,791	110	1,071
Year Three	90	2,358	105	1,428*
Objective Source Entitlement Costs				
Baseline	91	4,495	102	3,838
Year One	95	4,515	107	4,187
Year Two	93	4,592	105	4,294
Year Three	87	4,347	100	3,938
Housing Costs				
Baseline	91	244	102	247
Year One	95	322	107	349
Year Two	93	373	105	410
Wage Income				
Baseline	91	405	102	1,754**
Year One	95	400	107	1,750
Year Two	93	455	105	1,518**
Year Three	87	529	100	2,215**

+A number of minor costs, such as conservatorship, involuntary treatment and social services are omitted. Only objective entitlement information (not from interviews) is used.
*Indicates significantly lower cost ($p \leq 0.10$) than other study group.
**Indicates significantly higher wages ($p \leq 0.10$) than other study group.

Table 3:

Ventura vs. comparison expenditure patterns: percent of total dollars spent on each type of service for study samples

	Ventura	Comparison
	Percent of total	Percent of total
Study Year One		
Case management	22.7%	13.0%
Day tx	17.5	4.9
Medications	15.7	16.5
Residential	2.4	17.5
Socialization	13.9	3.1
Outpatient therapy	5.8	13.5
Vocational	1.4	5.4
Acute hospital	13.6	19.6
Long-term care	6.8	6.5
Study Year Two		
Case management	26.9%	14.0%
Day tx	8.5	2.8
Medications	19.3	14.6
Residential	3.7	14.7
Socialization	7.8	4.3
Outpatient therapy	10.3	9.3
Vocational	0.8	6.4
Acute hospital	19.9	24.2
Long-term care	2.8	13.1
Study Year Three		
Case management	23.2%	15.6%
Day tx	1.3	0.2
Medications	18.2	13.5
Residential	0.7	8.4
Socialization	3.1	1.9
Outpatient therapy	7.6	8.6
Vocational	0.5	3.3
Acute hospital	27.5	24.9
Long-term care	17.6	25.7

Table 4:

Mean cost per client in Ventura and comparison groups for mental health services

	Ventura Sample		Pooled Comparison		Significance Wilcoxon Ranksum	
	N	Mean	N	Mean	z-score	p
FY 1990-91						
Mental Health Services						
Case management	96	$2,066	109	$774	-5.876	0.000
Day tx	96	1,595	109	290	-2.341	0.019
Medications	95	1,445	108	988	-1.426	0.154
Residential	96	223	109	1,042	-0.850	0.395
Socialization	96	1,268	109	183	-2.808	0.005
Outpatient therapy	95	532	108	812	-0.654	0.513
Vocational	95	126	107	329	-0.876	0.381
Acute hospital	95	1,251	108	1,176	-0.931	0.352
Long-term care	95	630	108	391	-0.641	0.522
FY 1991-92						
Mental Health Services						
Case management	94	$2,045	107	$857	-6.541	0.000
Day tx	94	648	107	169	-1.710	0.087
Medications	93	1485	106	899	-2.820	0.005
Residential	94	285	107	902	-0.795	0.427
Socialization	94	590	107	263	-3.373	0.001
Outpatient therapy	93	790	106	576	-1.045	0.296
Vocational	93	63	105	397	-0.875	0.381
Acute hospital	93	1,534	106	1490	-1.284	0.381
Long-term care	93	212	106	810	0.107	0.915
FY 1992-93						
Mental Health Services						
Case management	88	$2,084	102	$1,278	-4.566	0.000
Day tx	88	121	102	15	0.644	0.520
Medications	87	1651	101	1,120	-2.126	0.033
Residential	88	64	102	690	-1.992	0.046
Socialization	88	281	102	160	-1.313	0.087
Outpatient therapy	87	691	101	710	-0.151	0.880
Vocational	87	52	100	278	-1.795	0.073
Acute hospital	87	2,498	101	2,068	-0.723	0.470
Long-term care	87	1,594	101	2,133	-0.249	0.803

CHAPTER THREE:

LESSONS LEARNED

SUMMARY OF LESSONS LEARNED

1. *THE SPECIFICATION OF A "SEVERELY MENTALLY ILL" TARGET GROUP FOR MOST PUBLIC MENTAL HEALTH SERVICES IS NECESSARY BUT FRAUGHT WITH DIFFICULTIES.*

2 *CLIENT OUTCOME AND SYSTEM PERFORMANCE INDICATORS ARE LESS USEFUL AND MORE COMPLICATED THAN EXPECTED.*

3 *WHILE INTERAGENCY PARTNERSHIPS CAN BE USEFUL, THEY ARE UNLIKELY TO HAVE A SIGNIFICANT IMPACT ON THE ADEQUACY OF SERVICES TO THE SERIOUSLY MENTALLY ILL.*

4. *INTEGRATING SPECIALIZED SERVICES WITH REGIONAL TEAMS IS CRITICAL AND DIFFICULT.*

5. *THE CONCEPT OF A PERSONAL SERVICES PLAN AS MORE THAN A SERVICE AUTHORIZATION MECHANISM NEEDS REVISION.*

6. *STRUCTURAL REFORM WITHOUT FINANCING REFORM LIMITS THE TRANSFORMATION OF A SYSTEM.*

7. *REORGANIZING AND REORIENTING AN ENTIRE MENTAL HEALTH SYSTEM REQUIRES THE COMMITMENT OF TOP LEADERSHIP AND TALENTED MANAGEMENT—AND EVEN THEN MAY MEET WITH MIXED SUCCESS.*

1. THE SPECIFICATION OF A "SEVERELY MENTALLY ILL" TARGET GROUP FOR MOST PUBLIC MENTAL HEALTH SERVICES IS NECESSARY BUT FRAUGHT WITH DIFFICULTIES.

AB 3777 pioneered the California targeting of services to persons with severe and persistent mental illness and functional impairments.

Now part of state law governing all county mental health programs, the AB 3777 definition of the seriously mentally ill target group was ground-breaking. AB 3777 participants were required to have a DSMIII diagnosis, a functional impairment due to the mental illness, and to be eligible for public benefits as a result of the impairment. Despite the wide currency of the definition, the present evaluation of the Ventura model is the first study of how the California definition works in practice.[8]

The Ventura target group criteria were usually clear to clinicians.

The Ventura model (and Bronzan-McCorquodale) definition is not as precise nor as prescriptive as those used in some other states. In particular it does not include a requirement for duration and intensity of prior service use. The greater clinical discretion in application of the definition led in the demonstration to some ambiguity about target population eligibility. About one-quarter of the line staff reported in surveys that they were not always or usually sure about the application of the criteria.

[8]Examples of states with statutorily defined severely and persistently mentally ill populations include Ohio, Washington, and Maine. A comprehensive study of services and outcomes for this population in Ohio has recently been published. Roth D, Champney TF, Vercellini J, et al: "Services in Systems: Impact on Client Outcomes," in *New Research in Mental Health,* Edited by Roth D. Columbus, Ohio Department of Mental Health, 1994.

Both the number of clients served intensively and the number of those treated only in specialized services increased during the AB 3777 study years.

A goal of the AB 3777 reorganization was to concentrate effort on the County's most seriously disturbed clients. Ventura succeeded in increasing the intensity of services for members of the target group assigned to teams. For those clients the percentage who received "intensive" services (defined as 25 or more units of ambulatory services a year) increased substantially from baseline to the second study year while the percentage who received low-intensity services (eight or fewer units) decreased.[9]

At the same time the number of non-team clients who received services only while they were in the jail or only in the crisis or inpatient units increased substantially. Thus there was also an increase in the number of clients who had only episodic contact with the system of care.

Even with its strong focus on serving the long-term disabled, turnover within the Ventura system is considerable.

In October 1990, 1,585 open cases which met the target group definition were assigned to the new teams. By March 1992 (18 months later) only 1,001 of these clients were still open cases, a loss of 37 percent.[10] Among the 1,122 clients classified by Ventura clinicians in October 1990 as needing services for an indefinite period, the loss was 25 percent.

The limiting of resources to the target population leaves some persons without access to services.

During June 1992, Adult and Older Adult Team staff completed a special form on all persons screened in person for intake but not admitted to services. Clinicians judged ten of these 79 persons to be unlikely to receive treatment elsewhere. The number could be higher, however, as uncertainty was expressed about many others.

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[9]This special study, and the others reported below, was performed by Ventura County Department of Mental Health staff at Lewin-VHI request using all system records rather than just the 100 clients in the study sample.

[10]An additional 113 clients were discharged and then readmitted. There is some imprecision in the numbers because persons were counted in different categories over time. Someone discharged in the first six months and readmitted in the second would be counted as ongoing in the third. That is, the categories are precise from one period to the next but not from the first period to the last.

In comments on the September 1992 survey, team staff noted concerns about lack of services for persons not meeting the target population criteria. The percentage of team staff who said there were clients who should receive services but who were excluded by the current criteria increased from 35 percent in September 1991 to 50 percent in September 1992.

2. CLIENT OUTCOME AND SYSTEM PERFORMANCE INDICATORS ARE LESS USEFUL AND MORE COMPLICATED THAN EXPECTED.

The AB 3777 client outcome measuring system has had a major impact but has not proven to be useful for its original intent.

The basic assumption underlying the development of the Ventura model was that "public mental health systems must begin to provide accountable, practical results upon which to make funding decisions and garner support from taxpayers."[11] The optimism that positive results would be useful in obtaining additional funds was fueled by the successes of measuring outcomes under the AB 377 children's model.[12]

Ventura staff, state administrators, and ISA staff jointly developed an outcome monitoring instrument called the Personal Profile. Ventura modified it somewhat to collect information in a form compatible with its MIS and to add some items. Data were collected from clinicians (in conjunction with clients) every six months.

The first publication of results was in December 1992.[13] While the report noted some positive results, the overall picture was of limited change in the status of the clients

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[11]Ventura County Mental Health. Assembly Bill 3777 Adult Services Project: Initial Outcomes, December 1992.

[12]In part because of the influence of the Ventura model, outcome measurement as a means for validating the worth of the public mental health system was incorporated in California's Performance Outcome System, mandated by the Bronzan McCorquodale Act.

[13]Ventura County Mental Health. Assembly Bill 3777 Adult Services Project: Initial Outcomes, December 1992.

served by the system, a result similar to the early experience with the state's Performance Outcome System. Mental health constituency expectations for the political usefulness of client outcome data for this population will need to be reexamined and a more thoughtful and complex context developed for the use of the information.

Ventura's attempt to establish a monthly monitoring system proved more costly to compile and complicated to use than expected.

Ventura hoped to establish an automated system that would track selected client outcome and system performance indicators on a routine basis. This information would assist managers and provide ongoing information on the system's performance to mental health constituencies and decision makers. During the first two years of the project these indicators were reported monthly, but in the third year the report was not produced regularly. The improvement in managerial decision-making and the ability to show the successes of the system ultimately proved not worth the significant effort and resource commitment it required to generate and compile these data in a timely fashion.

As mental health systems become more managed care oriented and/or are forced to live within capped budgets the ability to monitor system performance is critical. What the experience in Ventura suggests is that this is a more complicated and resource intensive endeavor than originally thought.

3. *WHILE INTERAGENCY PARTNERSHIPS CAN BE USEFUL, THEY ARE UNLIKELY TO HAVE A SIGNIFICANT IMPACT ON THE ADEQUACY OF SERVICES TO THE SERIOUSLY MENTALLY ILL.*

The AB 377 Ventura model for children placed heavy emphasis on interagency programs. Although a formal part of the Ventura model for adults/older adults, interagency relationships did not turn out to be central. In children's mental health, other public agencies—such as social service, juvenile justice and education—which have the central role for mutually served clients welcome mental health programs that might reduce their own expenditures. By contrast, since the county mental health program has *primary* responsibility for adult clients who are seriously and persistently mentally ill, related agencies generally have little incentive to provide much funding for cooperative programs. Given this overall limitation, Ventura was quite successful in developing "blended" programs with other agencies serving its clients. These included:

- A partnership with social services and substance abuse to evaluate and divert general assistance recipients through assisting them to become SSI eligible.
- A partnership with the criminal justice system to divert misdemeanant mentally ill clients to the Ventura mental health forensics team.
- A partnership with substance abuse to jointly fund and staff a SAMI (Substance Abuse/Mental Illness) dual diagnosis team.

- A partnership with the Department of Rehabilitation to increase access for mentally ill clients and provide specialized staff in both agencies.

- A partnership with local area housing authorities to obtain more federal Section 8 authorizations and to create new housing resources on the grounds of Camarillo state hospital that will serve as an alternative to skilled nursing care.

While these programs contributed positively to the overall mental health system, their impact was limited because they affect so few clients. For example, the SAMI program's structured outpatient and contract residential services served only a subset of dually diagnosed clients who were highly motivated to alter their substance use. The mental health teams reported that few of their clients were eligible for the SAMI services. As needed as these specialized services were, the needs of dually diagnosed clients can only be addressed adequately with expertise and resources available to each adult team.

While these partnerships resulted in additional dollars from other systems devoted to the seriously mentally ill, mental health planners should not be misled into believing that the dollars funding blended programs will be adequate to address the special needs of this population.

4. INTEGRATING SPECIALIZED SERVICES WITH REGIONAL TEAMS IS CRITICAL AND DIFFICULT.

Achieving a balance between teams and specialized services was an ongoing effort.

The appropriate balance between team-based control over resources and the management of specialized services is not easily defined nor implemented. One of the major contributions of the Ventura demonstration was the concept of a single point of responsiblity for clients over time and across settings which ensures continuity within a system of care. It has the added potential advantage of minimizing centralized administrative resource management by allocating all resources to the treatment entity closest to the clients. But in practice, economies of scale, resource limitations, and a need for an overall system perspective limited the ability of a county system to pursue a fully decentralized allocation of responsibility and resources.[14]

In the Ventura demonstration, crisis, inpatient, homeless, forensic and substance abuse services were provided by specialized staff not assigned to regional teams. There was also central support for three other services which remained a primary focus of the teams: housing, employment and cultural competence. Issues of responsibility and interactions between the team staff and the specialized staff evolved over the study period. The elements that seemed to be present when the relationships worked best were as follows: adequate resources for the centralized function, formalized protocols for how interactions would be handled, and good working relationships and respect between the specialized unit and the adult team management.

[14]For example, in Ventura the importance of state hospital and IMD expenditures after realignment promoted a stronger role for a centralized gatekeeper to these resources.

5. THE CONCEPT OF A PERSONAL SERVICES PLAN AS MORE THAN A SERVICE AUTHORIZATION MECHANISM NEEDS REVISION.

AB 3777 required that each member have a Personal Services Plan (PSP) that specified the member's goals and outlined the activities required to realize these goals. The PSP was to be repeated at six-month intervals to assess member progress and to ensure that goals were relevant to current circumstances. Ventura staff, like ISA staff, were exposed to state-provided training about "futures planning" which emphasized the importance of working with clients to think more expansively about their life goals.

Staff and clients found the Personal Service Plan to be of limited usefulness.

Based on the two staff surveys the PSP emerged as useful only for a minority of staff. In the second survey only 39 percent of line staff felt the PSP was critical to success; while 35 percent reported that much of what they did with clients did *not* relate to any PSP goal. About half felt the PSP was less useful once the client was known well.

Client awareness of the PSP increased over time but remained low. Clients were asked "do you have a written individual or personal service plan that lays out your service needs and how to meet them which you worked out with your (case manager/helping team)?" In Round One only 9 percent of the Ventura sample responded yes compared to 31 percent of the comparison samples who had a case manager, a significant difference. By Round Three, 35 percent of Ventura and 44 percent of comparison clients answered yes. Since all Ventura clients did have a written PSP, the low response rate presumably reflects a low salience of the plan to consumers' services and lives.

For the majority of staff and clients the AB 3777 demonstration (in both Ventura and the ISAs) did not yield persuasive evidence that the broader type of Personal Services Plan attempted in the demonstration is a necessary supplement to the use of a more traditional plan for coordination and/or service authorization.

6. STRUCTURAL REFORM WITHOUT FINANCING REFORM LIMITS THE TRANSFORMATION OF A SYSTEM.

The evaluation of the other programs funded by AB 3777, the Integrated Service Agencies, showed them to be an excellent service model in many respects. Areas which the ISAs, particularly the Village, excelled in were:

- Crisis response.
- Reduction of inpatient utilization and costs.
- Continuity of care.
- Reorientation to a rehabilitative orientation.

That the Ventura system did not achieve comparable results is due at least in part to the differing financial features of the two models. Because the ISAs had a capped budget for all mental health benefits for a given set of enrollees no matter what services were provided, they had the flexibility to use their staff's time and their purchase of service dollars however they wished. Ventura, like other counties, could maximize its total revenue by utilizing billable Short-Doyle/MediCal services, which at the time (before the adoption of the Rehabilitation Option) were restrictive in their service definitions. The distorting effects of these financial incentives and restrictions are hard to estimate, but interviews suggest that the need to maximize revenues clearly affected service delivery decisions at both the system and the individual client level.

Additionally, the Ventura system stopped short of giving regional teams the kind of all-embracing responsibility and authority inherent in the ISA model. The incentive to enhance continuity of care and to minimize the use of more expensive 24–hour services that flows from one entity controlling all resources for a set of clients should not be minimized.

The upcoming shift to a fully capped or a capitated MediCal system and an essentially capped realignment budget may offer the added service flexibility and financial incentives to achieve greater financial decentralization for the regional teams with ensuing improvements in crisis response, reduction in inpatient costs, and enhanced continuity of care.

7. *REORGANIZING AND REORIENTING AN ENTIRE MENTAL HEALTH SYSTEM REQUIRES THE COMMITMENT OF TOP LEADERSHIP AND TALENTED MANAGEMENT—AND EVEN THEN MAY MEET WITH MIXED SUCCESS.*

Perhaps the greatest accomplishment of the Ventura demonstration was transforming a clinic-based system into a network of teams and specialists. This task was made more difficult by the large base of professionals whose roles changed radically in the new system. Addressing the needs and concerns of the professional staff during this transition required a steady commitment of the Department's leadership and ongoing attention to the details of implementation. In the staff survey conducted at the beginning of the third year, line staff as a whole felt clearer about the goals and activities of their jobs, less burdened with paperwork, and more enthusiastic about what they were doing.

But substantial variation existed among the teams in their ratings of organizational factors like cohesiveness and job clarity and in their emphasis on rehabilitative services. The former points to complex organizational dynamics operating at a level below the conceptual framework of the model. And the latter reflects differences in the teams' clients and resources as well as varying priorities among team leaders. These findings point to the continuing management challenge of motivating and leading a diverse staff through the transition to a new model of care.

The lesson that large-scale change is possible—even if very difficult—is encouraging given the challenges that the rapidly changing environment currently poses for public mental health systems.

CHAPTER FOUR: CONCLUSIONS

VENTURA ACHIEVEMENTS

Client outcomes by themselves did not demonstrate the clear superiority of the Ventura model.

The Ventura client outcome results are encouraging in showing that positive change is possible for severely and persistently mentally ill clients in public mental health systems. The Ventura sample of clients achieved the following:

- reductions in acute inpatient length of stay
- temporary reductions in the costs of 24-hour care
- reductions in homelessness and arrests
- an increased percentage trying work
- greater satisfaction with living situation
- improved income status and health situation
- high client satisfaction with medication regimen
- improved self esteem
- improved ratings on a client reported measure of overall quality of life
- and improved family perception of client quality of life.

By contrast, on virtually no dimensions did the Ventura sample wind up worse off after the three years than they were at the beginning of the study.

The more difficult interpretive question is how much of the improvement resulted from the implementation of the Ventura model. Comparing the changes in the Ventura sample to those that occurred with similar clients selected from the other four counties helps answer this question. On some of the above dimensions the comparison clients

also improved: for example, reduction in homelessness and satisfaction with living situation.

On most dimensions where the Ventura sample showed improvement, the comparison samples did not. But on the majority of these, the Ventura sample was significantly less well off in the baseline (or first study year where there was no baseline) than was the comparison group. Therefore, on these dimensions the improvement in the Ventura clients resulted in their having achieved the same level as the comparison clients by the end of the study.

Finally, although we have not emphasized direct contrasts with the clients from the comparison counties, in most respects the two groups are very similar. If the Ventura model were *substantially* superior to the usual system one would have expected a number of results in which the Ventura clients were significantly better than the comparison clients. An examination of all the exhibits in this report and in Appendix B makes clear that this occurred very rarely.

The Ventura reform provides numerous lessons for counties looking to managed care for improved effectiveness and efficiency.

Over the course of the demonstration, Ventura County administrators transformed virtually every element of their system except its basic financing mechanism. Responsibility for individual clients was assigned to regional teams and the teams themselves were integrated with specialized and centralized services. While Ventura's solution to issues such as how much control over resources should be decentralized may not be applicable elsewhere, the same issues will confront any manager attempting to systematically organize services.

In some cases, we believe the experience of Ventura will prove definitive and, if taken to heart, may save much time and expense. The lessons learned from Ventura about the limitations of using client outcomes for measuring system success and guiding short-term management decisions, the problems when financing reforms don't accompany structural changes, and the need for management expertise and commitment to ensure system-wide change will be relevant to all system designers and managers.

The Ventura demonstration has added useful information to the still open questions that have become all the more important in today's environment: for example, how much to integrate regional team and centralized service functions and finances,

how to incorporate non-county operated systems, and how to integrate regional teams with other service models like the ISA or special assessment/brief treatment functions.

In summary, the Ventura model appears to us to be a well-developed and highly useful bridge from service systems of the 70's and 80's to those that will emerge from the altered financing of managed care.

THE FUTURE

The consolidation of fee-for-service Medi-Cal outpatient services into the county public mental health system will require changes in the regional team model.

Uncertainty surrounds the ultimate structure of public mental health services. But California appears committed to the consolidation of outpatient fee-for-service Medi-Cal services into the county systems whether or not Medicaid in general is block granted. If as suspected this brings an increase in the number of clients having situational or short-term mental disorders, then the regional team structure may not be suitable for providing all services in a geographic area. The assessment and intake functions and the short-term therapy functions now provided by the Ventura teams may better be provided by or arranged through a separate part of the system.

Other California counties are adopting the Ventura regional–team model, and some have adopted both ISAs and regional teams.

The Ventura model has had a very strong influence over how other counties have pursued the development of adult systems of care. Santa Clara County and Stanislaus County have both switched to a regional-team model of organizing services, and others are considering such a change. Stanislaus, the site of one ISA demonstration, now has both a team organization and an ISA. The Sacramento County system was radically restructured in 1993 and now includes both contract and county operated ISAs and contract-operated regional teams. Los Angeles County has funded seven ISAs, and planners for the County anticipate multiple small regions each having its own ISA.

Evaluations of varying system structures would provide important information to counties as they face a managed care environment.

We expect a good deal of experimentation around these system designs as more California counties move to embrace both team–based services and the broader population likely under a consolidated MediCal managed care system. While the Los Angeles ISAs are being rigorously evaluated, the regional teams and ISAs in other sites mentioned above are not.

State-level constituencies including the California Department of Mental Health and the California Mental Health Planning Council should foster and help obtain funding for well-designed evaluations and ensure that the results are coordinated and broadly disseminated. As California enters the managed care universe, knowledge of the comparative strengths and weaknesses of both the regional and the ISA models will be critical.

APPENDIX A

METHODOLOGY

METHODOLOGY

The study compares client outcomes and costs of each demonstration group to those of its comparison group and measures change over time by demonstration groups.

The basic evaluation design for the Ventura model entails comparisons of individual outcomes and costs for demonstration clients served by Ventura with those of comparison clients served in the "usual" mental health system. Although in many ways the comparison clients are very similar to Ventura clients, on some important variables — diagnosis and work experience in the baseline — they differ. (The characteristics of the study samples are shown in Appendix A, Exhibits 1 and 2.) Therefore the focus of analysis is usually on change within the Ventura group using the comparison clients as a reference group to see if change in Ventura appears to be a result of the Ventura system reforms. On some variables, particularly those for which the between-study group differences should be irrelevant, such as service satisfaction, we have compared Ventura clients and comparison clients directly.

The data for the outcome and cost analyses was derived from a set of objective databases and face-to-face client and family interviews.

Objective data was collected from state management information systems in the Department of Mental Health, the Department of Health Services, the Department of Rehabilitation, the Employment Development Department, the Department of Justice, the Department of Developmental Services, and the Department of Corrections (Appendix A, Exhibit 3). Where state data was not available, county or local data sources were pursued.[15]

Three rounds of face-to-face interviews with study clients were conducted by trained interviewers. The lengthy interviews allowed for collection of information which is not available from any objective data source, e.g., the client's living situation, friendships, social activities, and client feelings of well-being. It is important to note that all interviews

[15] County or local data came from county Departments of Social Services, county Medically Indigent Adult Programs, county courts, local housing authorities, county Conservatorship or Public Guardian offices, and county jails.

occurred during the study period; interview outcome measures for the baseline period are not available.

Two rounds of family interviews were conducted. Persons living with the client and spouses were given preference for an interview. Interview questions concerned the family member's experiences with the mental health system, the stresses and burdens the client may have caused for the family member, and the family member's satisfaction with the care and progress of the client.

A line staff survey focusing on organizational issues and implementation of the model was conducted twice, in September 1991 and September 1992. The Community Program Philosophy Scale was administered at the time of the first and second staff surveys and again in September of 1994.[16]

The statistical significance of findings is used to rule out the effects of chance.

The statistical significance of findings is reported for comparisons between demonstration and comparison groups and for measures of changes within one group over time. In each case, the statistical test is a convenient way to measure the likelihood that the reported differences are due to chance. Even though we have randomized study groups, chance can influence results in many ways. For example, the groups are unlikely to be equal on all variables that might affect a particular outcome; the time of an interview (in relation to having taken medications, perhaps), date, or even season might affect consumers' answers; or assignment to a particular treatment team or therapist involves chance factors.

When we say in this report that change over time or a difference between demonstration and comparison study groups is statistically significant, it means that there are 10 or fewer chances in 100 that a difference of that size might have resulted from chance factors if there were really no difference between the groups. This significance level is written as p=0.10. Lower levels are even better. For example, 5 chances in 100 that a result is due to random factors would be written p=0.05; 1 chance in 1,000 would be written p=0.001.

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[16]The instrument and results of the first administration comparing the ISAs to county programs are contained in the first Lewin report: Meisel, J., & Chandler, D. (1992). AB 3777 Demonstration Projects for the Seriously Mentally Ill: Report on Implementation. Report to California Department of Mental Health. Sacramento

Findings of statistical significance depend on sample size.

Measures of statistical significance protect against attributing to the demonstration programs results that are actually due to chance. It is important to note, however, that if the sample sizes are small, outcome differences must be very large to be statistically significant. Real differences may be labeled " not significant" simply because small sample sizes make it difficult to prove that results are not due to chance. Thus, as in the physical sciences, the ultimate test of findings is whether they are found when the program is replicated.

Statistical significance and substantive importance are different.

Statistical significance does not necessarily entail substantive significance. It is quite possible for differences to be statistically significant but trivial. Statistical significance is only a starting point.

Comparisons of costs incurred by demonstration and comparison clients are made cautiously.

The study design relies on comparisons of costs incurred by the demonstration clients with those incurred by comparison clients. Findings from such comparisons must be interpreted cautiously because of the following:

- *Lack of comparability of service units.* Although all five of the study counties use the state-mandated CR/DC system and all the comparison counties use the same contractor for their data system, the standardization of the system is far from complete. Thus costs for "the same" service might be very different not only because of differential prices but because the service itself varies in intensity, design or staffing.

- *High-cost infrequent events.* Some of the cost categories contain infrequent high-cost behaviors or events such as long-term 24-hour care, major physical illness, and felony convictions. The impact of one or two clients can be large.

APPENDIX A Exhibit 1:

Ventura and comparison counties (pooled): demographic variables at baseline for study samples

	Ventura		Comparison		Significance		
	N	%	N	%	χ^2=	df	p
Male	46	46	46	41	0.605	1	0.536
Bipolar or Schizophrenic	78	78	75	66	3.54	1	0.060
White	64	64	78	69	0.603	1	0.437
Never Married	49	49	47	44	0.641	1	0.423
Over Age 45	47	47	45	40	1.114	1	0.291

APPENDIX A Exhibit 2:

Ventura and comparison counties (pooled) study samples: outcome variables at baseline

	Ventura		Comparison		Significance: Wilcoxon ranksum	
	N	Mean	N	Mean	z value	p
Wages	91	$405	102	$1,714	-1.98	0.048
Total county mental health costs for FY 89-90	91	$10,128	102	$7,088	2.62	0.009
Entitlement Benefits for FY 89-90	91	$4,495	102	$3,838	1.15	0.2517
Acute days	91	6.48	103	3.55	0.35	0.729
Long-term days	91	8.08	103	6.16	-0.17	0.8617
Criminal justice detentions	91	0.121	102	0.108	0.22	0.829

APPENDIX A Exhibit 3: Data sources for Ventura and comparison clients	
Type	**Sources**
Demographics	State Client Data System (CDS) Screening Documents
Mental Health	State Client Data System (CDS) Short-Doyle Cost Reports Department of Health Services – Medi-Cal State Hospital Database Department of Developmental Services – State Hospital Billing IMD Database Department of Rehabilitation Veterans Administration Client Interviews
Involuntary Treatment	Ventura Public Guardian's Offices Ventura Superior Court Short-Doyle Cost Reports
Physical Health	Department of Health Services – Medi-Cal Ventura MIA Veterans Administration
Criminal Justice	Department of Justice Department of Corrections Ventura County Sheriffs Office Santa Clara Model for cost allocation methodology
Social Services	Client Interviews
Income Supports	Department of Health Services – State Data Transfer File Employment Development Department Ventura County Department of Social Services Client Interviews
Housing Supports	Local Housing Authorities

APPENDIX B

EXHIBITS

EXHIBITS

Exhibit 1:
Percent reporting being homeless at least one night in prior six months

	Demonstration		Comparison		Significance		
	N	%	N	%	$\chi 2=$	df	p
Round One	93	4.3	108	6.5	0.459	1	0.498
Round Two	86	4.65	98	1.0	2.284	1	0.131
Round Three	78	0.0	84	1.2	0.934	1	0.334

Exhibit 2:
Percent of study participants having been arrested each study year

	Demonstration		Pooled Comparison		Significance		
	N	%	N	%	$\chi 2=$	df	p+
Baseline	91	7.7	102	5.9	0.251	1	0.775
FY 90-91	95	8.4	107	2.8	3.083	1	0.119
FY 91-92	93	5.4	105	2.3	0.807	1	0.478
FY 92-93	87	1.2*	100	5.0	2.221	1	0.141

*Significantly lower than in the first study year.
+Fisher's Exact.

Exhibit 3:
Level of independence in living situation for interview respondents present in all three study years (Ventura N=74, pooled comparison N=82).

	Round One		Round Two		Round Three	
	Comparison	Ventura	Comparison	Ventura	Comparison	Ventura
	Percent	Percent	Percent	Percent	Percent	Percent
Independent	70.7	45.9	65.9	47.3	67.1	48.6
With parents	8.5	24.3	11.0	21.6	11.0	20.3
Group or institution	20.7	29.7	23.2	31.1	22.0	31.1
Significance	Chi2=11.4, df=2, p=0.003		Chi2=6.0, df=2, p=0.050		Chi2=5.7, df=2, p=0.058.	

Exhibit 4:

Ventura and pooled comparison clients who did not work in the baseline year, partitioned by diagnosis: percent working in each study year and working at all in any of the three study years*

	Bipolar or Schizophrenic Dx				Other Dx			
	Ventura		Comparison		Ventura		Comparison	
	N	Percent	N	Percent	N	Percent	N	Percent
1991	7	11.3	2	4.4	1	7.7	2	8.0
1992	4	6.5	2	4.4	1	7.7	4	16.0
1993	9	14.5	5	11.1	1	7.7	6	24.0
Any of Three Years	12	19.4	6	13.3	1	7.7	7	28.0

*None of the differences are statistically significant (at a level of .10 or less) using a chi-square test.

Exhibit 5:

Wages earned in the three study years for those clients present in all three study years — excluding those who worked in baseline unless they received vocational services in the study period

	Ventura		Pooled Comparison	
	N=	Percent	N=	Percent
Zero Wages	64	78.0	63.	73.3
$1 to 1,000	9	11.0	9	10.5
1,001 to 5,000	2	2.4	3	3.5
5,001 to 15,000	5	6.1	5	5.8
Over 15,000	2	2.4	6	6.9
Total	82	100	86	100

Chi-square = 2.114 with 4 df, p= 0.7148

Exhibit 6:

Mean income in dollars for each study year, by county and pooling comparison clients

	County A	County B	County C	County D	Ventura	Pooled Comparison
	Mean Income	Mean Income	Mean Income	Mean Income	Mean Income	Mean Income
Round One	9,757	8,621	15,078	8,483	8,326	10,249
Round Two	8,199	10,442	10,156	8,077	8,769	9,239
Round Three	10,865	9,380	12,745	9,429	9,494	10,547

Exhibit 7:
Percent reporting they lacked money for food, or clothing, or housing or medical care in at least one of two prior months

	County A	County B	County C	County D	Ventura	Pooled Comparison
	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent
Round One	8 29.6	10 35.7	9 36.0	13 46.4	29 31.2	40 37.4
Round Two	5 20.8	7 25.9	2 8.3	5 21.7	21 25.3	19 19.4
Round Three	2 25.0	7 30.4	3 12.5	3 14.29	19 25.0	15 19.7

Exhibit 8:
Percentages reporting have a regular (not emergency or urgent care) source of health care

	County A	County B	County C	County D	Ventura	Pooled Comparison
	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent
Round One	17 65.4	17 68	16 72.7	23 85.2	51 59.3	73 73.0*
Round Two	16 66.7	23 88.5	17 70.8	19 82.6	55 64.0	75 77.3*
Round Three	9 75	20 83.3	19 79.2	18 78.3	62 80.5	66 79.5

*Significant at 0.05.

Exhibit 9:
Interview respondents reporting having at least one friend

	Ventura		Pooled Comparison		Significance		
	N	%	N	%	χ^2=	df	p
Round 1	81	87.1	96	88.1	0.04	1	.834
Round 2	75	87.2	86	87.8	0.01	1	.911
Round 3	72	92.3	74	89.2	0.47	1	.493

Exhibit 10:
Number of activities, previous week

	Ventura		Pooled Comparison		Significance		
	N	Mean	N	Mean	t	df	p
Round 1	86	5.57	106	5.66	0.30	190	.765
Round 2	86	5.50	97	5.45	-0.15	181	.876
Round 3	78	4.68	84	5.64	3.14	160	.002

Exhibit 11:
Percent of respondents indicating "satisfied" or better with how they feel about their life as a whole

	County A	County B	County C	County D	Ventura	Pooled Comparison
	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent
Round One	12 44.4	14 50	16 64	7 24.1	51 55.4	49 45.0
Round Two	7 30.4	18 66.7	15 62.5	8 34.8	55 64.7*	48 49.5
Round Three	6 46.2	16 66.7	12 50	11 47.8	48 63.2+	45 53.6+

*Significant at p=0.051.
+Change is significant at p=0.10 or better.

Exhibit 12:
Colorado Symptom Scale mean scores (higher scores mean more symptoms)

	County A	County B	County C	County D	Ventura	Pooled Comparison
	Means	Means	Means	Means	Means	Means
Round One	2.43	2.33	2.37	2.95	2.50	2.53
Round Two	2.35	2.30	2.44	2.61	2.50	2.42
Round Three	2.06	2.37	2.35	2.58	2.35*	2.38*

*Indicates significant change from Round One to Round Three (for both groups).

Exhibit 13:

Percent with no observable symptoms on interviewer rating

	Ventura		Comparison		Significance		
	N	%	N	%	χ^2=	df	p
Round One	91	71.4	108	57.4	4.20	1	0.040
Round Two	80	62.5	96	65.6	.185	1	0.667
Round Three	78	89.3	84	71.4	8.56	1	0.003

Exhibit 14:

Interviewer ratings of interviewees' appearances: Number who have a "completely acceptable" appearance (significance test done on all five categories of acceptability).

	Ventura		Comparison		Significance		
	N	%	N	%	χ^2=	df	p
Round 1	76	82.6	79	73.8	6.04	4	.196
Round 2	57	71.3	56	58.3	7.95	3	.047
Round 3	62	79.5	52	61.9	6.29	2	.043

Exhibit 15:

Rosenberg Self-Esteem scale mean scores (higher scores mean greater self-esteem)

	County A	County B	County C	County D	Ventura	Pooled Comparison
	Means	Means	Means	Means	Means	Means
Round One	2.81	2.90	3.08	2.43	2.76	2.79
Round Two	2.69	2.81	2.85	2.55	2.82	2.73
Round Three	2.76	2.94	2.92	2.55	2.83*	2.80

*Significant improvement from Round One: p=.10.

Exhibit 16:

Interview respondents reporting that they had received too much medication, too many types of medication, or the wrong medication

	Ventura		Comparison		Significance		
	N	%	N	%	χ^2=	df	p
Round One	23	27.4	17	19.5	1.46	1	.227
Round Two	14	17.1	13	15.7	0.06	1	.807
Round Three	10	14.7	9	14.3	0.005	1	.946

Exhibit 17:

Mean of family interview respondent satisfaction with client quality of life (seven point scale with higher meaning more satisfaction)

	Ventura		Comparison		Significance*		
	N	Mean	N	Mean	t	df	p
Round 1	34	3.98	55	4.56	-0.198	76	0.843
Round 2	30	4.56+	41	4.40	.652	38	0.519

*Regression model controlling family member education and whether client lives with family as well as client diagnosis and wages in baseline.
+Significantly higher in Round Two than Round One.

Exhibit 18:

Scale of family interview respondents views on clients' competence and hope for the future

	Ventura		Comparison		Significance*		
	N	Mean	N	Mean	t	df	p
Round 1	29	2.27	55	2.46	0.36	76	0.722
Round 2	30	2.55+	41	2.45	-0.26	38	0.797

*Regression model controlling family member education and whether client lives with family as well as client diagnosis and wages in baseline.
+Significantly higher (better) in Round Two than Round One.