AB 3777 SYSTEM REFORMS:

THE INTEGRATED SERVICE AGENCY MODEL

A Summary Report To

The California

Department of Mental Health

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VALUE HEALTH

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Acknowledgment

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

The Integrated Service Agency (ISA) model embodies comprehensive mental health system reforms.

The ISA model originated in a Lieutenant Governor's Task Force on the Seriously Mentally Ill, which forged a blueprint for a reformed California mental health system. The Task Force's work was incorporated into the Wright, McCorquodale, and Bronzan Act of 1988 (AB 3777), which established a demonstration project to test the effectiveness of the ISA model. [1]

The ISA model is unique in combining structural and programmatic innovations.

Recent mental health system reforms have taken either structural or programmatic approaches. One focus has been to modify *structural* elements in the financing and delivery of services by consolidating funding streams, creating capitated payment mechanisms, and establishing a single administrative line of authority.[2] A separate reform track has introduced innovations at the *program* level, most notably the assertive community treatment team in the Madison PACT model.[3] The AB 3777 Integrated Service Agency model is unique in combining both these elements.

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[1]The legislation also funded a test of a reform of the county service system, usually called the Ventura model. Results of the Ventura model evaluation are presented separately in a report available from the California Department of Mental Health.

[2]Goldman, H. H., Morrissey, J. P., & Ridgely, M. S. (1994). Evaluating the Robert Wood Johnson Foundation program on chronic mental illness. The Milbank Quarterly, 72(1), 37-47. Reed, S. K., Hennessy, K., Mitchell, O. S., & Babigian, H. M. (1993). The effects of a mental health capitation program II: Cost-benefit analysis. In Paper presented at the National Conference on Mental Health Statistics, June 6-9, Washington, D.C.

[3]Summaries of these programs are contained in: Chamberlain, R., & Rapp, C. A. (1991). A decade of case management: A methodological review of outcome research. Community Mental Health Journal, 27(3), 171-187; and Bond, G. R., McGrew, J. H., & Fekete, D. M. Assertive Outreach for Frequent Users of Psychiatric Hospitals: A Meta-Analysis. In press.

The structural reforms of the ISA model are:

- *An ongoing enrolled population of clients.* The ISA is the single point of responsibility for its members — for life, if need be.
- *A capitated payment system.* The ISA receives a set amount of funds prospectively for each enrolled member. The ISA need not bill for individual services as in a fee-for-service system.
- *Funding consolidation.* The ISA receives a sum of money which represents the maximum funds available per member, as if all the mental health funding streams (Medi-Cal, Short-Doyle, Medicare, Department of Rehabilitation) combined their contributions into one pot. In the demonstration, consolidation was simulated.
- *In-house provision of services.* Virtually all non-hospital services are provided by the ISA rather than the ISA brokering services purchased from other entities.

The following programmatic reforms are critical elements of the ISA model:

- *Core service teams.* The legislation prescribed an interdisciplinary team with roughly a one-to-ten staff-to-client ratio. The team is available 24 hours a day, seven days a week.
- *Client direction.* The model places the client at the center of the rehabilitation process.
- *Rehabilitation orientation.* The core service teams go beyond symptoms to focus on functional abilities and behaviors. AB 3777 specified the responsibility of ISAs for a wide range of rehabilitation client outcomes.
- *Assertive outreach and engagement.* The core service team actively pursues contacts with the members and engages them in whatever setting is most appropriate.
- *Individualized services.* Each member has a Personal Services Plan developed jointly by the member and the core service team.

- *Family involvement.* Families are expected to be active participants in the model as partners in providing care, as recipients of supportive service, and as part of an ISA's policy committee.

The goal of the demonstration was to show how much could be accomplished with a cross-section of clients if a model system were adopted.

AB 3777 required that study participants have a serious and persistent mental illness as demonstrated by 1) a DSM III-R diagnosis other than a primary substance use disorder, and 2) a substantial functional impairment due to the mental disorder, and 3) eligibility for public assistance as a result of the functional impairment. No attempt was made to limit eligibility to high service utilizers, and cost control was not the primary goal of the demonstration.

Two demonstration ISAs were selected by the Department of Mental Health through an RFP process. At each site a team of state, county, and ISA clinicians screened referrals. Eligible clients at each site were randomly assigned to a demonstration or comparison group. Roughly 100 clients were assigned to each ISA and each comparison group. Clients in the comparison groups continued to receive usual services through the county mental health system.

Lewin-VHI was retained to conduct the independent evaluation mandated by AB 3777. Results for the ISA members were compared to those for the randomly assigned comparison group over a three-year period (Figure 1). Data came from various state and local data bases and from three face-to-face client interviews, two family interviews, and two staff surveys. A brief description of the study methodology and data sources is in Appendix A. This summary presents the main findings of three earlier and longer reports.[4] Major findings are shown in exhibits in the text; other reference tables are contained in Appendix B.

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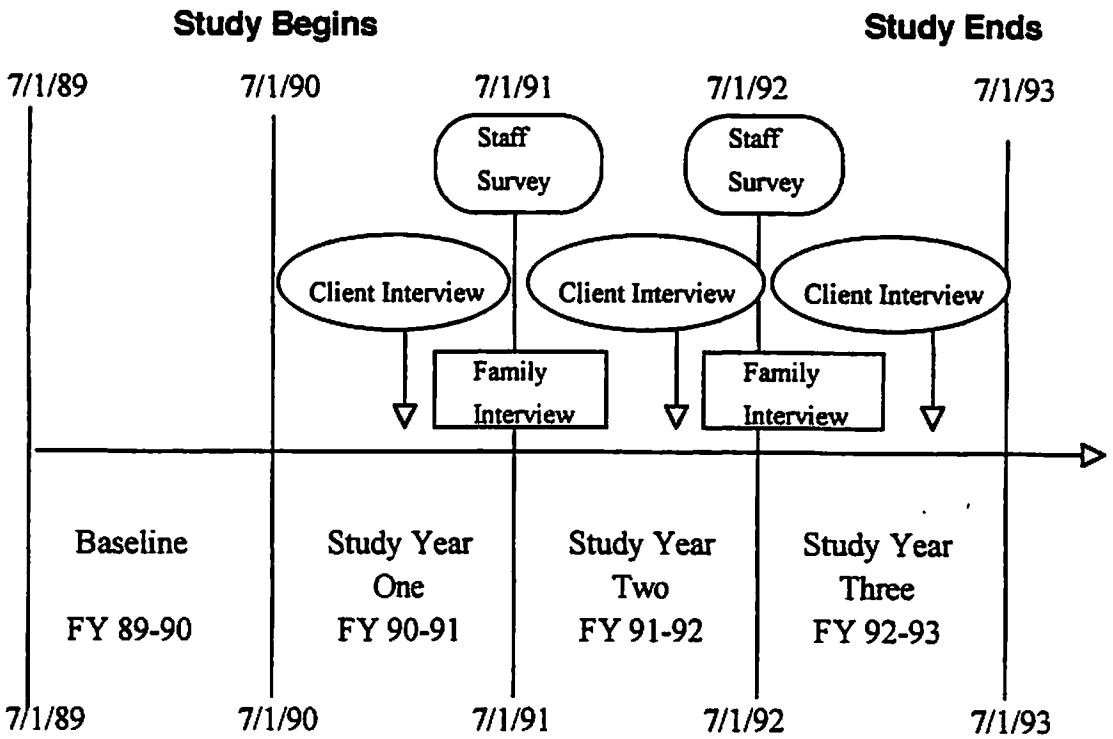
[4]Meisel J, Chandler D: AB 3777 Demonstration Projects for the Seriously Mentally Ill: Report on Implementation. Report to California Department of Mental Health. Sacramento, January, 1992.

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 Integrated Service Agencies. Report to California Department of Mental Health. Sacramento. May 1995.

These reports are available from the California Department of Mental Health, 1600 Ninth Street, Sacramento, CA 95814.

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.

The demonstration ISAs are the Village in Long Beach and the Stanislaus Integrated Services Agency (SISA) in Modesto.[5]

The Village is operated by the Mental Health Association of Los Angeles. Low-rent apartments are widely available in the area, but substance abuse is a nearly omnipresent temptation. The Village management and clinical leadership have wide experience in psychosocial rehabilitation programs. Community life focuses around a large and pleasantly decorated building which is also the site for several Village-operated businesses, including a cafeteria which serves the public. The Long Beach public mental health services which comparison clients attend are limited in scope and availability.

SISA is operated by Community Transitional Resources (CTR), a small non-profit agency that has for a number of years provided residential services for Stanislaus County clients. Modesto is a moderate-sized city in the California Central Valley where unemployment is high and low-rent housing difficult to find. Key SISA staff had a clinical rather than psychosocial rehabilitation background. SISA initially stressed client direction, provided more services off-site than did the Village, and did not have transitional employment sites. The Stanislaus County Mental Health system, which serves comparison clients, is considered a high-quality county program.

The capitation rates for ISA members were much higher than the expenditures on the same clients in the baseline.

Designers of the ISA model were concerned with solving system problems and increasing rehabilitative outcomes. They believed improving the quality of care would increase costs somewhat but in ways that would be justified by results. Baseline demonstration mental health costs (which were not known when capitation rates were set) were in fact considerably lower than expected. Thus the disparity between the baseline and ISA capitation rate was greater than anticipated. The overall average baseline expenditure for mental health services in Long Beach was $5,471, while the

[5]We describe the ISAs and their membership in terms of study participants. The Village also serves over a dozen members referred and paid for by Los Angeles County, and both programs had a few members who were not study participants.

Village first-year capitation rate was $15,045; the Stanislaus baseline was $9,072, and its first-year capitation rate was $14,463.

Implementation was fully successful in one of the sites (the Village), but problematic in the other (SISA).

The Village experienced no staffing, fiscal or operational problems that threatened the integrity of the model, either in the start-up or ongoing operations of the program.

At SISA, although start-up went smoothly, the parent agency lacked the management experience necessary to guide the program to maturity. During the demonstration's second year, financial problems and interpersonal staff conflicts led to substantial staff turmoil and a complete turn-over in leadership.

In the view of the evaluators, the demonstration's implementation in the Village represents an adequate test of the ISA model, while SISA results during the third year of the demonstration represent only a qualified test of the model.[6]

[6]Although we look at all three years, and baseline when it is available, the second study year (FY 91-92) is most representative considering both the accuracy and completeness of the cost information and the development of the programs.

CHAPTER TWO

FINDINGS[7]

SUMMARY OF FINDINGS

FINDING 1: THE ISA MODEL RESULTED IN A MORE FLEXIBLE SYSTEM OF ENHANCED CONTINUITY OF CARE AND A GREATER EMPHASIS ON REHABILITATION.

FINDING 2A: MAJOR CLIENT OUTCOMES — INCLUDING HOSPITAL USE AND EMPLOYMENT — FAVORED THE ISAS.

FINDING 2B: SOME IMPORTANT CLIENT OUTCOMES SHOWED LIMITED ISA EFFECTIVENESS.

FINDING 3: ISAS WERE SUCCESSFUL FROM THE FAMILY PERSPECTIVE.

FINDING 4: COST-AVOIDANCES AND MONETARY BENEFITS DID NOT OFFSET THE HIGHER ISA COSTS.

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7 As is standard practice, we have used tests of statistical significance to determine which differences between the demonstration and comparison groups could 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 ISA MODEL RESULTED IN A MORE FLEXIBLE SYSTEM OF CARE WITH ENHANCED CONTINUITY OF CARE AND A GREATER EMPHASIS ON REHABILITATION.

The ISAs were designed to solve three pervasive mental health system problems: lack of continuity of care; inflexibility due to categorical funding restrictions; and an excessive focus on symptoms rather than rehabilitation. In general, we believe the ISAs did solve these problems and that they represent an improved system of care which would be beneficial for most seriously mentally ill clients.

CONTINUITY OF CARE

Continuity of care was enhanced through the assumption of a broad and flexible responsibility for member welfare by the ISA team. The evidence for improved continuity of care comes from client and staff surveys as well as interviews during site visits. The following is a partial list of supportive findings:

- The members remained engaged with the ISAs throughout the three years. In year three, only 3 percent of the original Village members and 6 percent of SISA members still living in the county had disenrolled from the ISA.

- ISA members were far more likely than comparison clients to have the name and phone number of a mental health worker to help with crises after hours and to have called that number within the last six months (Appendix B, Exhibits 1-2).

- A significantly higher percentage of ISA members than comparison clients who were hospitalized was helped by staff members in a variety of ways, including participating in planning for discharge and helping to take care of practical matters that could sustain a member's community living situation. Although the numbers are small, the same trends hold for active outreach while members were in jail.

- The Village psychiatrist was the attending physician during hospital episodes.

- Significantly fewer ISA members than comparison clients reported having no one to turn to for material needs or emotional supports. ISA staff assumed much of this supportive responsibility from friends and family (Appendix B, Exhibits 3-4). The intensity and the quality of the "fabric of engagement" between members and staff are explored in the Department of Mental Health publication, What Helps?[8]

- Family members at both ISAs rated the programs significantly higher on a scale that measured the extent to which staff assertively pursued ongoing contact with the client.

FUNDING FLEXIBILITY

Capitated funding and simulated funding stream consolidation freed the ISAs from the need to provide only services that fit third-party reimbursable categories. ISA management and staff believe this service flexibility is one of the most important components of the ISA model. Here are examples of how the ISAs used this flexibility:

- The Village negotiated a favorable rate for acute hospital care with a private hospital.

- Medications for ISA members cost roughly twice as much as for comparison clients, largely because ISAs were able to prescribe and purchase medications not on the Medi-Cal formulary.

- The Village operated several businesses that served as paid training sites for members.

- The Village hired a substance abuse counselor rather than having to refer clients to substance abuse programs.

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[8]Gross G, Anderson B: What Helps? Professionals and users of California mental health services talk about what they are learning. California Department of Mental Health, 1600 Ninth Street, Room 250, Sacramento, California, 95814, 1993.

- SISA gave the membership $50,000 annually, which they used to hire peer advocates.

- Rather than having to buy available services that may not be appropriate to individual client needs, ISAs provided needed services directly. The Village devoted 90 percent of its resources to in-house expenditures. The only major services purchased were acute hospital care, medications, and certain administrative services from its sponsoring organization. SISA devoted a somewhat lower but still high percentage (75 percent) of its resources to support internal services.

REHABILITATION EMPHASIS

The shift to a rehabilitation focus was apparent at both ISAs, but the Village implemented a more comprehensive set of opportunities for members to acquire skills. Tables 1A and 1B show expenditures by service for all the study groups.

The Village devoted over three-quarters (77 percent) of its resources to the rehabilitation services of case management, socialization, and employment services. The usual system devotes only 12 percent of its expenditures to these services for the comparison clients (Appendix B, Exhibit 5). Ninety-six percent of the Village members received three or more rehabilitative services during FY 91-92, while 92 percent of comparison clients received one or none.

Roughly half of SISA's resources were applied to rehabilitative services — which is less than the three-quarters at the Village but more than the 16 percent in the Stanislaus comparison group (Appendix B, Exhibit 5). As in Long Beach, the percentage of SISA members receiving rehabilitative services was greater than in the comparison group: 49 percent of SISA members received three or more, while 82 percent of the comparison group got only one or none.

Table 1A:

Long Beach: Mean cost per client in demonstration and comparison groups in FY 1991-92 for mental health and other services and income supports

	Demonstration		Comparison		Significance Wilcoxon Ranksum
	N	Mean	N	Mean	p=
Mental Health Services	99		92		
Case management		7,791		639	0.000*
Day tx		46		62	0.477
Medications		2,145		642	0.000
Residential		54		133	0.001
Socialization		2,226		79	0.000
Outpatient therapy		895		1,465	0.749
Vocational		4,811		81	0.000
Acute hospital		970		1,767	0.918
Long-term care		258		1,459	0.150
TOTAL MENTAL HEALTH SERVICES		19,196+		6,328	0.000
Non-Mental Health Services					
Criminal Justice	99	362	92	413	0.855
Conservatorship	99	21	92	28	0.288
Physical Health	99	1,554	93	4,658	0.215
Involuntary treatment	86	8	65	16	.04280
Substance abuse	99	92	93	139	0.919
Supports					
Entitlements	91	7,365	73	7,399	0.472
Housing subsidy	99	659	92	328	0.127
TOTAL NON MENTAL HEALTH		10,061		12,981	
TOTAL PUBLIC COSTS		29,257		19,309	

*0.000 indicates less than one chance in a thousand that the difference could be chance variation

+This figure is more than the first year capitation rate because of cost of living increases; because it includes carried-over start-up funds; because these costs are only for study clients (there were a few ISA clients excluded from the study); because all costs are included not just ISA costs; because the figure reflects costs for a few study participants who were no longer ISA members; and because it is a cost rather than revenue figure.

Table 1B:

Stanislaus: Mean cost per client in demonstration and comparison groups in FY 1991-92 for mental health and other services and income supports

	Demonstration		Comparison		Significance Wilcoxon Ranksum
	N	Mean	N	Mean	p=
Mental Health Services	111		103		
Case management		8,355		1,183	0.000*
Day tx		467		850	0.014
Medications		2,071		1,061	0.000
Residential		873		641	0.000
Socialization		84		0	0.000
Outpatient therapy		2,185		682	0.000
Vocational		422		143	0.000
Acute hospital		1,604		2,736	0.136
Long-term care		1,771		847	0.799
TOTAL MENTAL HEALTH SERVICES		17,833+		8,144	0.000
Non-Mental Health Services					
Criminal Justice	111	205	103	724	0.449
Conservatorship	111	90	103	162	0.145
Physical Health	111	4,725	104	2,374	0.448
Involuntary treatment	99	7	80	18	0.078
Substance abuse	111	49	104	49	0.764
Supports					
Entitlements	102	7,618	81	7,372	0.981
Housing subsidy	111	240	103	211	0.460
TOTAL NON-MENTAL HEALTH		12,934		10,910	
TOTAL PUBLIC COSTS		30,767		19,054	

*0.000 indicates less than one chance in a thousand that the difference could be chance variation

+This figure is more than the first year capitation rate because of cost of living increases; because it includes carried-over start-up funds; because these costs are only for study clients (there were a few ISA clients excluded from the study); because all costs are included not just ISA costs; because the figure reflects costs for a few study participants who were no longer ISA members; and because it is a cost rather than revenue figure.

CLIENT AND FAMILY SATISFACTION

Further evidence of a more successful system of care comes from higher client satisfaction in the Village and higher family satisfaction in both ISAs.

Client ratings on a widely used consumer satisfaction scale that combines items about the quantity, quality, type, and effectiveness of services significantly favored the Village in all three years. On a scale that included questions about how often staff were friendly, courteous, and respectful; how much clients trusted staff members; and how much they felt wanted, Village members also rated the ISA staff significantly higher than comparison clients rated their system of care. And a significantly higher percentage of Village members rated their mental health program as helpful, overall, in the first two years than did comparison clients. None of these client satisfaction ratings differed between SISA and the Stanislaus comparison group.

Family members were asked the same general questions posed to clients. Village and SISA families were significantly more satisfied with services their relatives received than were families of comparison clients.

FINDING 2A: MAJOR CLIENT OUTCOMES – INCLUDING HOSPITAL USE AND EMPLOYMENT – FAVORED THE ISAs.

Figure 2 is a summary of client outcomes for both the Village and SISA. The results are categorized as "strong and consistent," "positive pattern," and "not significant or only isolated findings." The client outcomes presented below (by outcome domain) under Finding 2A reveal strong and consistent positive results or show a reliable pattern of positive results. Results under Finding 2B did not show positive change at either ISA.

HOSPITALIZATION

The Village used acute and long-term hospitalization in a cost-effective and clinically useful fashion.

The percentage of Village members and comparison group clients hospitalized each year of the demonstration was similar: between 13 and 18 percent annually (Figure 3). But those Village members who were hospitalized had fewer admissions and significantly shorter lengths of stay, which resulted in fewer hospital days per user (Figure 4).

The Village negotiated a per diem rate with a private hospital that was half the cost per day for the comparison group at the county hospital. The combination of the lower days per user and the lower cost per unit resulted in the Village having an overall lower expenditure than the comparison group on acute care during the three years, saving roughly $325,000.

The Village was able to make acute hospitalization decisions based on member needs, hospitalizing somewhat more but for shorter periods of time. The built-in continuity of care during the hospitalization and the availability of intensive support after discharge allowed staff to use hospitalization when necessary and only for as long as necessary. Family supporters of the ISAs endorsed from the beginning this clinically "titrated" approach to hospitalization with intervention occurring *before* clients hit bottom.

Figure 2:
Summary of Outcomes Favoring ISA by Domain

VILLAGE: Summary of Client Outcome Results by Domain			
Outcome Domain	Strong and Consistent	Positive Pattern	Not Significant, or Isolated Finding
24 Hour Care			
Acute	✔		
Long-term	✔		
Negative Impacts			
Conservatorship		✔	
Arrests			✔
Homelessness			✔
Independent Living		✔	
Employment	✔		
Income		✔	
Physical Health			✔
Family, Friends, Fun		✔	
Well-Being		✔	

SISA: Summary of Client Outcome Results by Domain			
Outcome Domain	Strong and Consistent	Positive Pattern	Not Significant, or Isolated Finding
24 Hour Care			
Acute	✔		
Long-term			✔
Negative Impacts			
Conservatorship		✔	
Arrests			✔
Homelessness			✔
Independent Living	✔		
Employment	✔		
Income			✔
Physical Health			✔
Family, Friends, Fun		✔	
Well-Being			✔

The Village also decreased utilization of 24-hour long-term, secure care. Over the three years the Village days per year per member decreased from five to less than half-a-day. The comparison group averaged eight days annually. These utilization rates translated into a cost difference over the three years of $335,000. These results appear to be reliable and constitute an important finding even though the very small numbers precluded statistical significance.

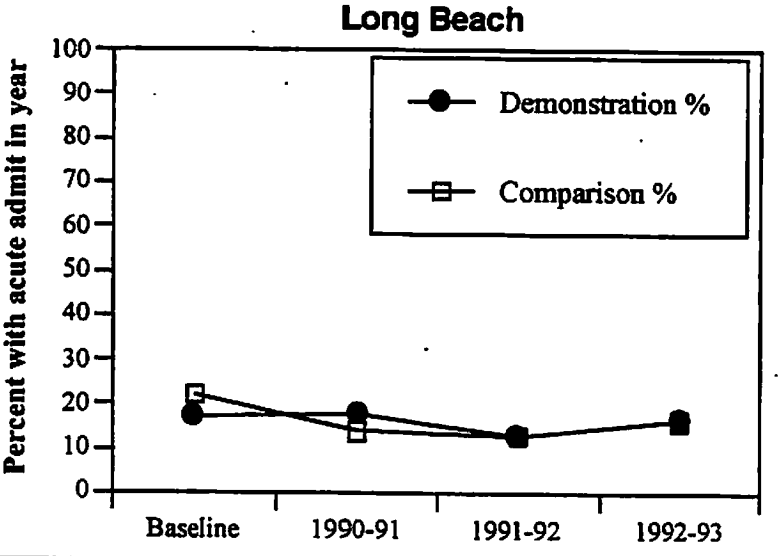
SISA decreased acute hospitalization substantially during the first part of the demonstration.

As shown in Figure 3, SISA cut the percentage of members hospitalized during the first two years of the demonstration roughly in half, from 40 percent in the FY 89-90 baseline to 19 percent in the second study year. The admission rate was significantly lower than that of the comparison group in the first two study years but they were comparable in the third year. Average lengths of stay were similar in all three years.

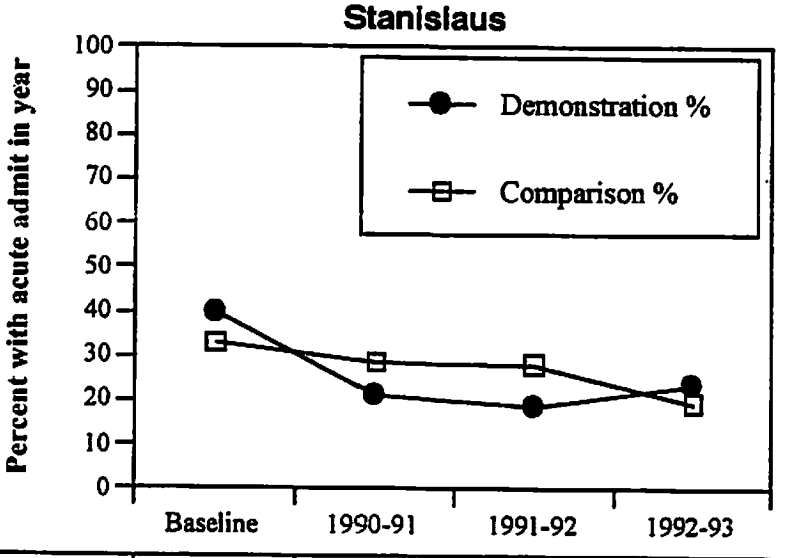
SISA's lower admission rate resulted in significantly lower acute inpatient costs, but only in year two. The fact that SISA paid a higher rate at the county inpatient facility than did the comparison group, plus the similar admission rates in year three, resulted in no three-year inpatient cost difference.

SISA achieved its lowered admission rates in part through the use of a residential treatment facility operated by its parent organization, CTR. Only a minority of the admissions to this facility were direct diversions from inpatient, but the availability of the facility to ease crises and provide respite filled an important role for SISA members and staff.

Figure 3 :
Acute Inpatient Admits, by Year



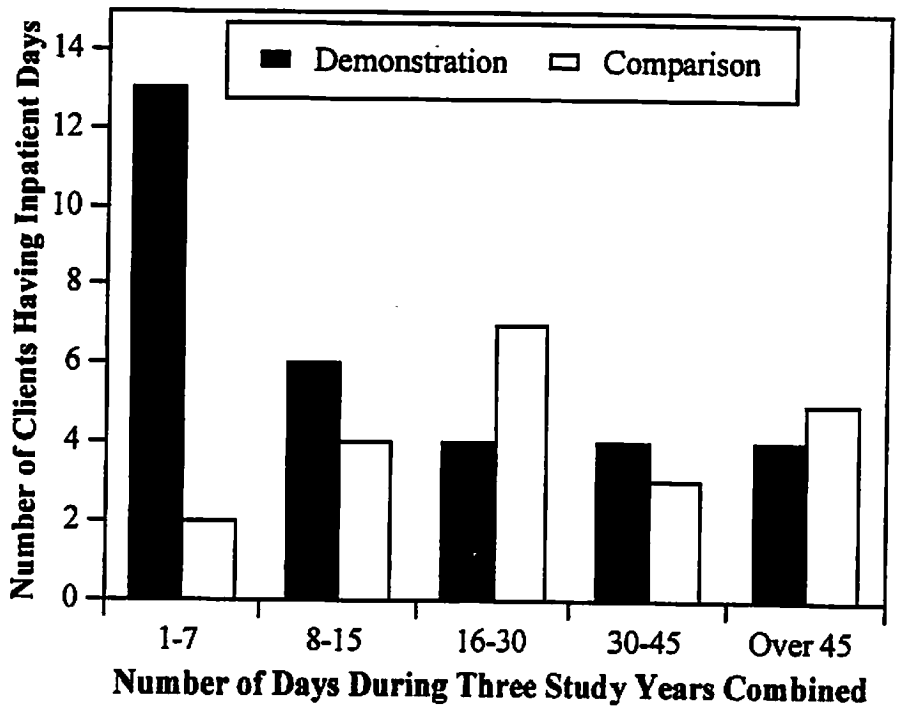
Demonstration	16.9	17.6	13.1	16.8
Comparison %	22.2	13.9	13	16.3



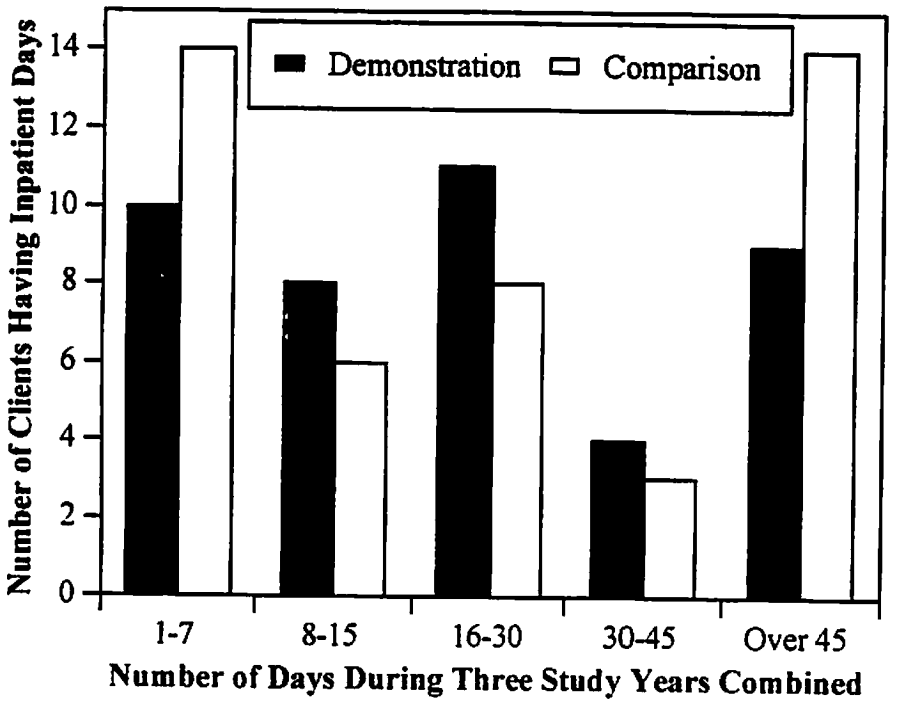
Demonstration	39.8	20.9	18.9	23.8
Comparison %	33	28.7	28.2	19.6

Figure 4:
Acute Inpatient Days in Three Study Years Combined for Those With Any Days

Long Beach



Stanislaus



Overall, the ISAs provide important information about the possibility of reducing hospital use.

Village members had a comparatively low hospitalization rate before the demonstration — certainly the lowest in reported studies of Madison-type models. The Village program showed that exemplary care does not necessarily reduce hospital admissions when baseline rates are already low, but does reduce readmissions, length of stay and cost. The very significant reductions in admissions in the first two study years at SISA reinforce the Madison model findings that an assertive treatment team approach can reduce admissions when baseline hospitalization rates are relatively high. All in all, due to the ISA demonstrations, we have a much better idea of how and how much Madison-like models can affect hospitalization over a range of populations.[9]

CONSERVATORSHIP

Village members were on conservatorship substantially fewer days than were comparison clients.

The Village virtually eliminated the use of conservatorship during the two study years for which data is available. During these years, six comparison clients and two Village members were on conservatorship. In the two-year period, Village members were on conservatorship roughly 1/10th as many days as were comparison clients. Although statistical significance was marginal, the trend clearly favored the Village (Appendix B, Exhibit 6).

SISA members had fewer days on conservatorship than did comparison clients.

Use of conservatorship at SISA during the two study years for which we have data was half what it was in baseline while the comparison group remained essentially unchanged. For example, in the second study year, the mean was 15 days used by SISA members, versus 30 for comparison clients. In the same year, 4.5 percent of SISA members had

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[9]A much more detailed comparison of Madison model and ISA hospitalization results is contained in the full report. McGowen, M., Meisel, J., Chandler, D., AB 3777 Final Report: The Integrated Service Agencies. Report to California Department of Mental Health. Sacramento. May 1995. The ISA results also provide a much better idea of what levels and patterns of hospital use can be expected in exemplary programs in different environments under capitation.

any days on conservatorship, versus 10 percent for comparison clients. While these differences are consistent and substantively important, they did not quite attain statistical significance (Appendix B, Exhibit 7).

INDEPENDENT LIVING

Village members showed a consistent pattern of greater independence in living situation.

The proportion of Village members living independently (not with family of origin or in a group or institution) increased in each of the study years, while the proportion living with their parents or in group settings decreased. By the third year, only 11 percent of Village members lived in group or institutional settings, versus 23 percent of comparison clients (Figure 5).

An increasing percentage of members at SISA lived independently over the course of the demonstration.

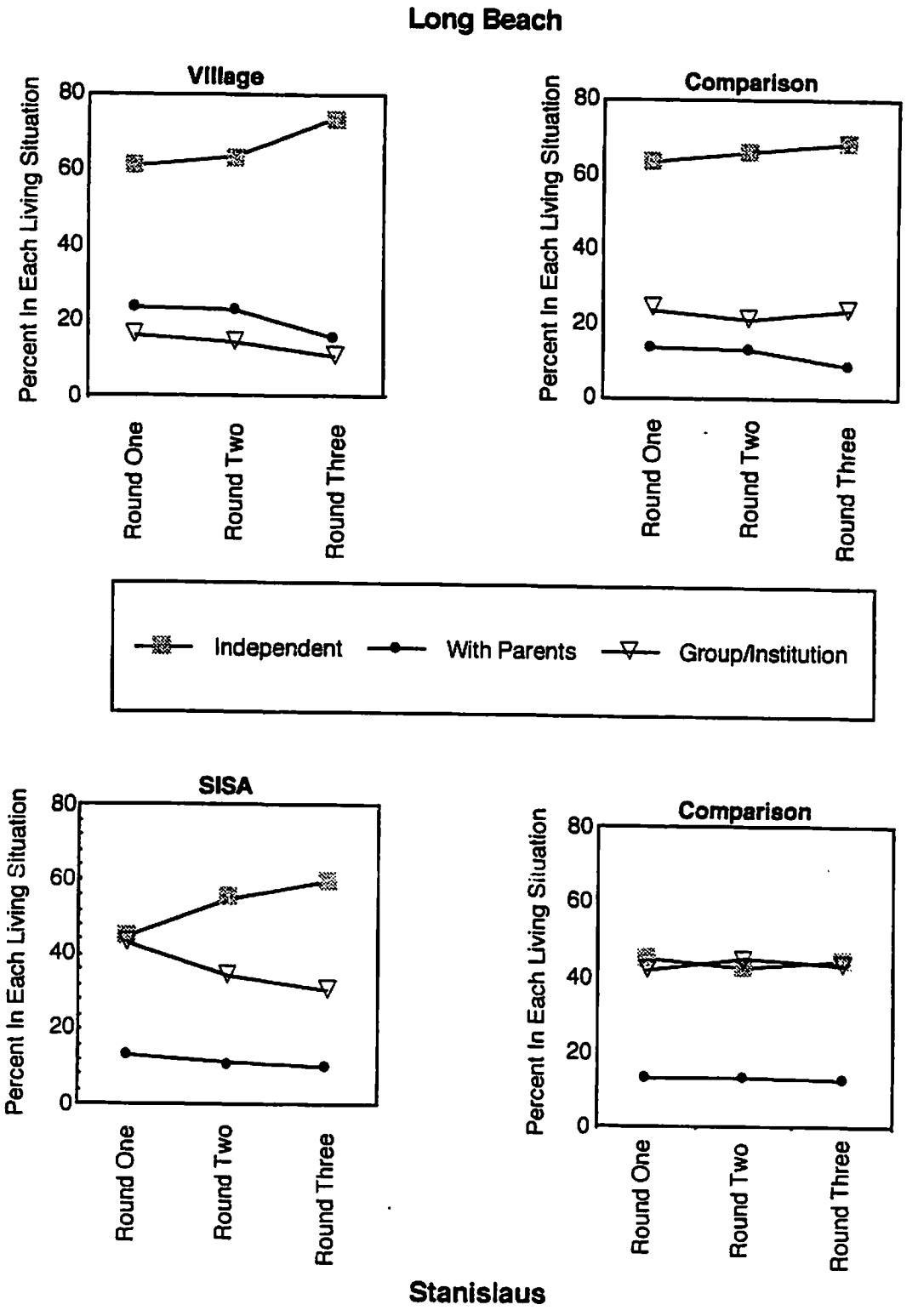
The percentage of SISA members who lived independently increased from 44 percent in year one to 60 percent in year three, while the percentage of comparison group members living independently remained level; this difference was significant in years two and three. A corresponding difference occurred in the percentage living in group settings, with the percentage of SISA members declining from 37 percent to 26 percent (Figure 5).

EMPLOYMENT

Significantly more Village members tried work than did comparison clients.

The Village had a strong internal employment program that included Village-operated businesses and specialized staff for job development and support. In the second study year, 25 percent of all resources were spent on employment services.

Exhibit 5:
Living Situation at Time of Interviews



The Village was highly successful in having its members try working. Roughly one-third of its members tried work in the first year of the demonstration; two-thirds of the members tried work in year three (Figure 6). Over the demonstration's three years, nearly three-quarters (73 percent) of its members had at least one work experience, compared to only 15 percent of the comparison group. The percentage of Village members who worked outside the Village increased in each of the three study years; over the three years, 35 percent of those who worked at all held at least one job in the community.

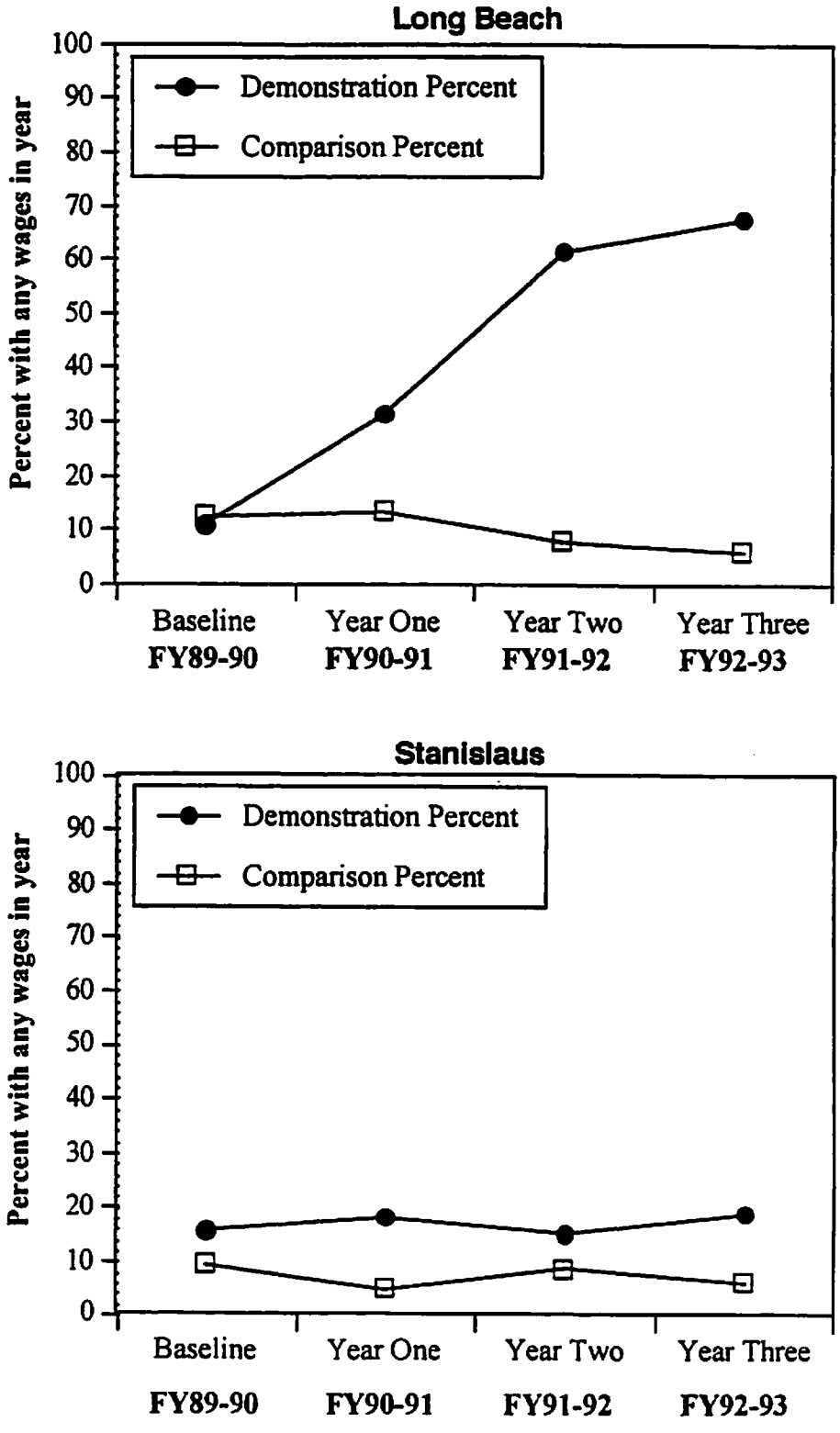
Of the Village members who tried work, 84 percent worked during at least three of the 12 study quarters. However, most of the jobs held by Village members were part-time and of short duration.

The mean three-year earnings of all Village members were significantly higher than the average wages of all the comparison clients ($2,858 for the Village; $1,435 for comparison clients), but low in general.

In FY 91-92, the Village spent an average of $5,014 on each of the 95 members who received some vocational service. The average wages in the following year for those 95 members was $1,172,[10] so that in the short term the expenditures were not offset by subsequent earnings.

[10] Of the total earnings, 58 percent were paid by the Village, so the total monetary societal benefit is less than the $1,172.

Figure 6:
Percent With Any Wages, Baseline and Three Study Years



Significantly more SISA members tried work than did comparison clients.

While SISA was more successful than the usual system in having its members try work, its success was far less than the Village's (Figure 6). The percentage trying work at SISA was significantly higher than in the comparison group in years one and three. Also significantly different was the percentage who worked at all during the three years — 29 percent of SISA members, versus 11 percent of the comparison group.

Many SISA members who worked could be considered *just* tryers, as only 50 percent working did so during at least three of the 12 study quarters. Most jobs held by SISA members were part-time and temporary.

In all three study years and for the three years combined, wages for the entire study group were statistically different but not substantively higher for SISA members than comparison clients. The three year total mean wages for all SISA members was $783, versus $701 for comparison clients.

The average FY 91-92 expenditure for each of the SISA members who received vocational services was $1,040. The immediate pay-off for these members was $504 in member wages earned during the next year (FY 92-93), indicating that about half the vocational expenditures on SISA members were offset by next-year earnings.

Despite some favorable outcomes, the SISA employment program did not begin to maximize the vocational program potential the ISA model allows. The SISA effort was less effective because it devoted so few resources to the effort (only two percent of its resources in the second study year) and because it used the traditional approach of providing employment services through a sister agency within CTR (which had a Department of Rehabilitation contract) rather than integrating the vocational activity into the SISA program.

HAVING AN ADEQUATE INCOME

The Village program positively affected income in several ways.

Although there were no striking differences between Village members and comparison clients, a number of smaller differences add up to a positive pattern for the Village.

- Total income was consistently somewhat higher for Village members than comparison clients because of wages, although the difference was significant only in the first year.

- In each interview round, Village members were more satisfied with their income level than were comparison clients, but the difference was significant only in the third year.

- Fewer Village members than comparison clients reported lacking money to pay for necessities like food, clothing, or housing. The difference between the groups was consistent across all three interviews (roughly one-third of the Village members compared to 41–44 percent for the comparison group), but the results were not statistically significant (Appendix B, Exhibit 8).

PERSONAL WELL-BEING AND SOCIAL SUPPORT

Village members had a pattern of higher ratings on well-being measures.

Village members had consistently higher scores on a scale that combined reported client satisfaction in eight quality-of-life outcome areas (satisfaction with life in general, friends, family, fun, paid work, health, income, and personal safety). In two of the three years, the difference was statistically significant.

Village members also reported greater feelings of hope and optimism than did comparison clients, but the results were significant only in year one.

Village members were rated by interviewers as having fewer observable symptoms (significant only in year three — Appendix B, Exhibit 9) and to have a more socially acceptable appearance (significant in years one and three).

Members of both ISAs reported more social support than comparison clients.

ISA members at both sites reported more social and leisure activities and fun than did comparison clients. Village members also were more positive regarding friendships.

FINDING 2B OTHER CLIENT OUTCOMES SHOW LIMITED ISA EFFECTIVENESS.

Even with the combination of structural and programmatic reforms and a three-year trial period, important client outcomes were not affected.

Unfortunately, some goal areas were minimally affected. The vast majority of ISA members continued to have incomes below or barely above the poverty level (Appendix B, Exhibit 10), and a significant minority did not have sufficient resources to cover their essentials of housing, food, and clothing (Appendix B, Exhibit 8). Similarly, rates of criminal victimization remained high (22 to 33 percent) among ISA members (Appendix B, Exhibit 11). Clients reporting at least one night of being homeless in the prior six months ranged from 6 to 12 percent at the Village and 2 to 8 percent at SISA. In general, ISA members fared no better on each of these measures than did comparison clients.

Even though many of the ISA members had improved their living situations, were working, and had enhanced social supports, their self-esteem feelings and self-reported symptoms did not differ from those of comparison clients. And a sizable minority of ISA members, like comparison clients, still were arrested for violating the law (Appendix B, Exhibit 12-13). Some of these outcomes are attributable in part to client substance abuse, which staff reported remained high throughout the study period.[11]

[11] Although the client interview included questions on substance abuse, we judged the responses to be unreliable.

FINDING 3: ISAs WERE SUCCESSFUL FROM THE FAMILY PERSPECTIVE.

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. The particularly low response rates in Long Beach allow us to use only results from the first interview. Statistical tests indicated that first-round Long Beach results were not biased. In both rounds in Stanislaus, characteristics of demonstration and comparison families do not show bias but may not represent the samples in their entirety.[12]

Relatives of ISA members reported experiencing somewhat less burden than did comparison families.

Architects of AB 3777 hoped that the ISAs would relieve families of many burdens associated with having a mentally ill relative. Scales measured possible 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 or psychological stress related to caring for the relative.

Significantly fewer Village families than comparison families reported *any* burden in two of the domains: behavioral issues and physical or mental stress. There were no differences at Stanislaus between ISA relatives and comparison relatives on any of the four domains in either round.

We scaled the *amount* of reported burden for those relatives that said they felt any burden. While the numbers are quite small, in Stanislaus in the first round, the SISA

[12]The issue of bias is explored in detail in the May 1995 Final Report, *op cit.*

member relatives reported significantly less burden on three of the four scales than the comparison client relatives. There were no differences in the second interviews.

Village families spent less time providing assistance to their relatives than did families of comparison clients.

Village and comparison families did not differ significantly in the amount of money they spent on behalf of their relative nor in the amount contributed to the family economy by the client. But relatives of Village members reported spending significantly fewer hours per week helping their relative than did relatives of comparison clients (5.3 hours versus 14.6 hours).

SISA families tended to make greater financial contributions to their relatives than did comparison families.

While family expenditures to or on behalf of clients were similar in the first interview, SISA families reported higher average annual expenditures in the second round — $1,048 versus $464 for comparison relatives. In both rounds, reported SISA member contributions to the family's income were less than the family expenses, whereas for the comparison group, the client's contribution exceeded what was spent by the family. There was no difference in the number of hours families spent helping their relative.

Village and SISA families reported feeling better overall about the challenge of coping with their relative's situation than did comparison client families.

A scale was constructed of questions that assess the relative's overall sense of how well they are able to manage the challenges associated with the client. Village families and SISA families in the first interview round had significantly higher coping scores than did families of comparison clients.

Relatives of ISA members rated the client's well-being higher than did relatives of comparison clients.

Village and SISA families rated their relative's quality of life higher than did comparison client families, significantly so both in Long Beach and (in the first round interview) in

Stanislaus. The same pattern prevailed on a scale containing questions about the family member's assessment of the client's sense of competence and hopes for the future.

FINDING 4: COST-AVOIDANCES AND MONETARY BENEFITS DID NOT OFF-SET THE HIGHER ISA EXPENDITURES.

Savings on hospitalization were not sufficient to counteract the other mental health cost differences between ISA members and comparison clients.

Reduced ISA use of traditional clinical services, especially hospitalization, should permit reallocation of some resources to rehabilitative services. This occurred to some extent at the Village but not at SISA. Over the three years, Village acute hospital and long-term care costs combined totaled $322,000, versus $984,000 for comparison clients, providing roughly $660,000 for reallocation to rehabilitative services. The SISA and comparison group three-year costs for hospital and long-term care were essentially equivalent — $1.0 million for SISA members, versus $1.1 million for comparison clients.

The higher ISA mental health expenditures were not offset by savings in other public costs or by increases in monetary benefits.

Table 2 shows the total public costs for the baseline and last two study years for the two study groups at each site.[13] The total public expenditures average approximately $30,000 for the ISA members and approximately $19,000 for the comparison clients (Tables 1A and 1B, and Table 2).

[13] In the first study year, FY 90-91, the ISA management information system was not yet capable of allocating costs to individuals..

Table 2:

Public mental health and other service and entitlement costs+ in baseline and final two study years. FY 90-91 is a start-up year for which comparable information is not available.

	Demonstration		Comparison		Significance (T test)
	N	Mean	N	Mean	p=
Long Beach					
Baseline FY 89-90	83	$11,867	90	$13,539	0.577*
FY 91-92	99	25,816	92	16,037	0.000**
FY 92-93	95	26,162	86	18,622	0.000**
Stanislaus					
Baseline FY 89-90	108	$17,621	106	$16,979	0.608*
FY 91-92	115	27,387	103	16,164	0.000**
FY 92-93	104	24,143	97	15,421	0.000**

+Only objective benefits (not from interview information) are included and court and conservatorship costs are excluded. See Tables 1A and 1B for comprehensive costs during FY 91-92.
*Regression model with age, sex, race, diagnosis as covariates. The dependent cost variable has been transformed by taking its square root.
**Regression model with age, sex, race, diagnosis and baseline as covariates.

Proponents of the ISA model had hoped that the better system of delivering mental health services would result in reduced public expenditures in other public costs. Expenditures for both physical health services and entitlements represent large components of the public expenditures on the study samples. Cost off-sets were not found in either of these areas (Tables 1A and 1B).[14] Estimated criminal justice expenditures were relatively small and did not differ between the study groups.

As noted earlier, while average wages were higher for ISA than comparison clients, the actual difference was small and therefore not sufficient to counterbalance, at least in the short run, the difference in public expenditures (Appendix B, Exhibit 14).

[14] The large amount of cost in the physical health area highlights the importance of the coordination of mental health and physical health benefits and services under the state's Medi-Cal carve-out. It also suggests the potential for a physical health offset from good mental health services, which would accrue to the physical health managed care plan. The Village had lower physical health costs, but the small numbers and wide variation in costs made the finding potentially unreliable.

CHAPTER THREE:

LESSONS LEARNED

SUMMARY OF LESSONS LEARNED

1. REALIZING ALL THE BENEFITS FROM THE ISA MODEL IS HEAVILY DEPENDENT ON STRONG MANAGEMENT AND EITHER PREEXISTING EXPERTISE OR GOOD TRAINING.

2. AN ISA MUST INCLUDE STRUCTURED PROGRAMS AND PSYCHOSOCIAL REHABILITATION TO BE EFFECTIVE.

3. TO CREATE A GENUINE SHIFT IN THE USUAL DISTRIBUTION OF RESOURCES, AN ISA MUST BE ABLE TO CONTROL 24-HOUR CARE EXPENDITURES AND COMMIT TO REHABILITATION EFFORTS WITH ALL CLIENTS.

4. CORE SERVICE TEAMS ARE AN EFFECTIVE WAY TO ORGANIZE SERVICES, BUT INTEGRATING SPECIALIZED SERVICES IS CRITICAL AND DIFFICULT.

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

6 THE INTEGRATION OF EMPLOYMENT SERVICES WITH A CORE SERVICES TEAM ALONG WITH PROVISION OF TRANSITIONAL EMPLOYMENT OPPORTUNITIES IS A STRONG MODEL.

7. IN A CAPITATED SYSTEM "MEMBERSHIP" AND "SCOPE OF BENEFITS" NEED CLEAR DEFINITION.

8. REPLICATIONS OF THE CROSS-SECTION ISA MODEL SHOULD HAVE AT LEAST 200 MEMBERS.

1. REALIZING ALL THE BENEFITS FROM THE ISA MODEL IS HEAVILY DEPENDENT ON STRONG MANAGEMENT AND EITHER PREEXISTING EXPERTISE OR GOOD TRAINING.

Architects of the ISA model envisioned a number of ISAs in each geographic region. While we believe this is a viable and appropriate vision, the demonstration showed the success of the model to be highly dependent on the organization that implements it. Any larger-scale implementation of ISA programs will need to pay close attention to the ISA organizational infrastructure.

In particular, the small non-profit agencies which provide many of California's public mental health services are ill-equipped to accept the responsibility for providing or arranging for a comprehensive scope of services or for assuming the financial risk from capitated arrangements. CTR lacked the management expertise and experience to develop and maintain a comprehensive system reform that included financial risk. Any county entering into ISA-type arrangements with such agencies will need to provide assistance with management information systems and financial management relevant to a managed care system. And full risk assumption by such agencies should be approached very cautiously.

2. AN ISA MUST INCLUDE STRUCTURED PROGRAMS AND PSYCHOSOCIAL REHABILITATION TO BE EFFECTIVE.

SISA relied on client empowerment and the team staff's generalized skills to help members set and achieve goals. SISA had few staff with specialized rehabilitation expertise or responsibilities and lacked the specific program content that would assist clients in building their skills or enhancing their supports. The employment, residential and day treatment programs were contracted for rather than being a part of the ISA.

In contrast, the Village had highly organized employment and socialization programs. While the Village changed (and improved) both programs over the study period, they were consistently characterized by expert and experienced leadership, a formal structure marked by great flexibility and attention to individual need, and integration with the core service team. These accomplishments were not achieved without struggles, however. Nor did the Village develop effective programs in all areas — there was no formal family education program, for example.

Team members appear capable of developing the expertise needed to deal with benefits, legal, and housing issues and provide help with socialization and crises. However, for some rehabilitation goals, the core service team will not have the time or expertise to develop the focused efforts needed to design and implement an effective program. The use of special expertise and more structured program elements by the Village in the areas of employment, substance abuse, and development of social support networks yielded better outcomes.

3. TO CREATE A GENUINE SHIFT IN THE USUAL DISTRIBUTION OF RESOURCES, AN ISA MUST BE ABLE TO CONTROL 24-HOUR CARE EXPENDITURES AND COMMIT TO REHABILITATION EFFORTS WITH ALL CLIENTS.

The usual system of care is characterized by disproportionate resources used by few clients.

In the baseline year the distribution of mental health resources used by the prospective members in both ISAs shows a pronounced skew (Figure 7). This pattern, common to most mental health systems, results from a few clients receiving a disproportionate share of the resources. Two-thirds of the clients in the baseline year received roughly 20 percent of the resources while the remaining one-third absorbed close to 80 percent. The

cost for the higher user group almost always results either from repeated hospitalizations or long-term placement in locked settings.

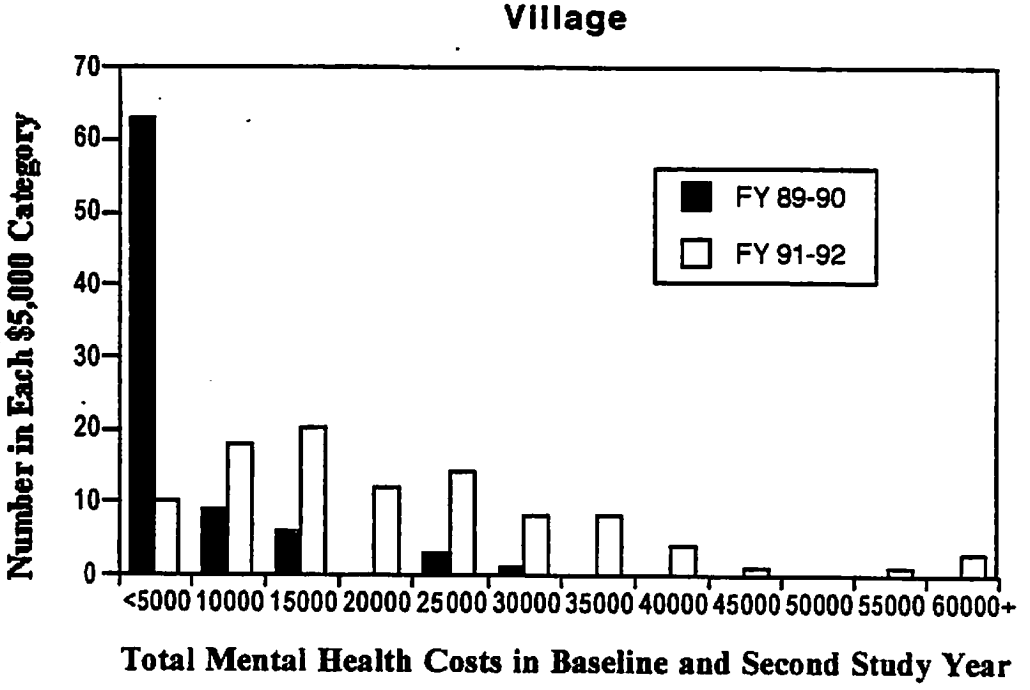
Both ISAs altered somewhat the distribution of resources among members, but only the Village was successful in creating a genuine shift in resource priorities.

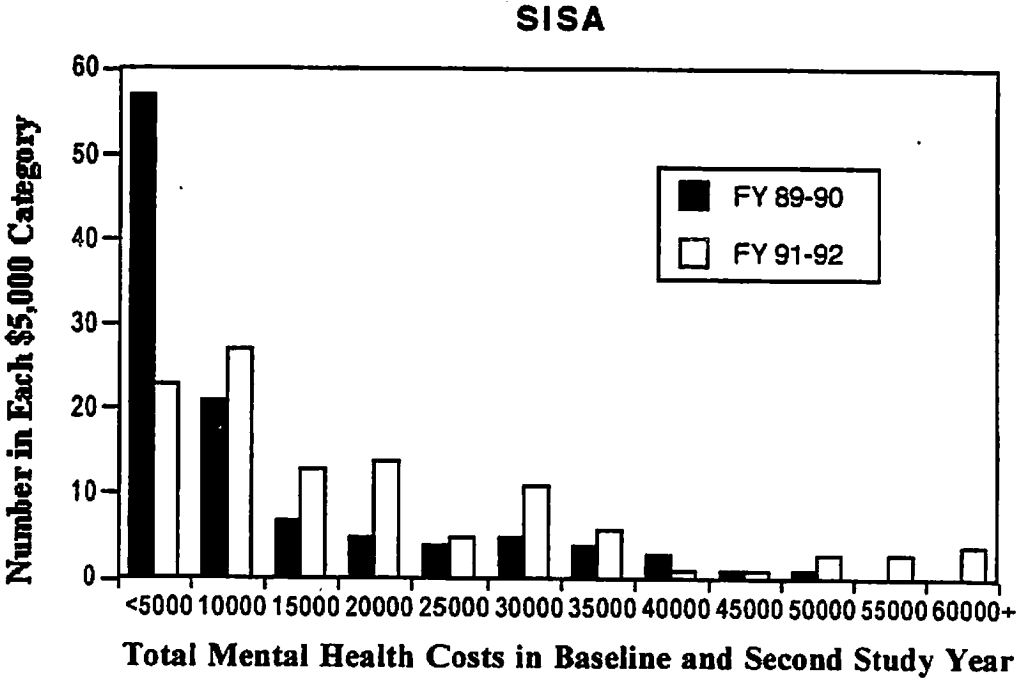
The shape of the distribution of expenditures per member changes substantially for both ISAs from the baseline. Figure 7 shows the more even pattern of resource distribution at each ISA during the second study year. The proportion of the dollars spent on the lowest two-thirds of the members in the second study year is 41 percent at the Village and 31 percent at SISA.

The goal is not to provide all members with the same level of services since needs obviously vary. What is important is to provide *each* member the opportunity for rehabilitative services and to prevent the usual pattern in which the high users are those who use excessive hospital services. The patterns of service use for the low and high users at each ISA show that the Village succeeded in this objective while SISA appears not to have.

The high users at the Village received large amounts of rehabilitation services compared to the SISA high users, who more resembled the high user groups in the usual system. Hospital costs accounted for only 10 percent of the costs for the highest 20 percent cost group at the Village whereas it represented 39 percent of the expenditures for the comparable group at SISA.

Figure 7:
Distribution of Costs in Baseline and Second Study year





The pattern of service use for the lowest utilizers also differed. At the Village almost all of the lowest cost 20 percent of the members (mean cost = $5,500) received some outpatient, vocational and socialization services although the amounts were often small. At SISA, on the other hand, the overall mean expenditure for the lowest 20 percent of the users was only $2,700 which was actually *lower* than the level of their non-hospital expenditures during the baseline years.

4. CORE SERVICE TEAMS ARE AN EFFECTIVE WAY TO ORGANIZE SERVICES, BUT INTEGRATING SPECIALIZED SERVICES IS CRITICAL AND DIFFICULT.

ISA members and staff believed the treatment team model was effective.[15] Approximately 90 percent of ISA members rated team help positively in each of the client interviews at each site.

Staff satisfaction with working in teams was high throughout the demonstration period. More than three-quarters of the staff on both staff surveys at each ISA reported being very or mostly satisfied working within a team structure. On the second staff survey at both the Village and SISA, 86 percent of staff rated teams as "*much* more effective" than staff organization in the usual system.

Integrating necessary specialized expertise and program elements with the activities of the core service teams is not easy. The Village struggled with the appropriate assignment of responsibilities, and, over time, staff reported that respective roles became clearer and unproductive tensions diminished.

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[15] SISA began with eight two-person teams, consisting of a clinician and a paraprofessional, responsible for 17 members, and shifted in September 1991 to three large teams (two clinicians, two paraprofessionals, and on two teams a community program specialist). The Village used throughout three large teams, each of which had one LCSW, one nurse, one part-time physician, and two paraprofessionals.

The lesser importance placed on specialized staff at SISA, on the other hand, resulted in their roles being less clearly defined and their value not fully realized. Additionally, tensions between them and the core service teams continued.

It appears particularly important that the psychiatrist be considered a full participant on the team rather than a specialist.

Finally, moving responsibility for resource allocation decisions to the team level empowers both staff and clients.

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) to specify the member's goals and outline 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. The PSP was to be broader than the more traditional plan, which acts as a service authorization. Staff were to engage members in thinking more expansively and seriously about their futures than is usual in service oriented goal-setting with this population. The combination of more genuine goal-setting, broader scope of potential services provided by flexible funding, and the inclusion of non-service items (like members' actions) were to make the PSP process an important programmatic reform that would become the framework for individualized assistance.

However, based on both client and staff surveys, the PSP emerged as useful only for a minority of clients and staff. During the second survey, only half the staff at each ISA agreed with the statement that "members know and remember what's in the PSP," and about the same percentage felt that the PSP "was critical to success." Confirming this view was the evaluator's review of records during site visits, which

showed most PSPs at both sites to be, in fact, skimpy. The intended broader role for the PSP was thus not translated into action by the staff.

6. THE INTEGRATION OF EMPLOYMENT SERVICES WITH A CORE SERVICES TEAM ALONG WITH PROVISION OF TRANSITIONAL EMPLOYMENT OPPORTUNITIES IS A STRONG MODEL.

The Village's employment program is based on core ISA reform principles: assumption of the rehabilitation mandate to assist members with employment, flexible funding, providing rather than purchasing employment services, and integration of the vocational activity with the support of core service teams. But the *content* of the employment element — namely, its use of on-site transitional job opportunities in addition to supported employment in the community — was the Village's choice.

This combination of features makes the Village employment program unique. Two other programs in the country have published a design that integrates supported competitive employment with a core services team, (one has demonstrated promising outcome results),[16] but neither also incorporates transitional employment like the Village-operated businesses. Thus the Village program may well serve as a national model. However, given the part-time and temporary nature of many of the jobs held during the study period, it will be important to continue to follow employment progress among Village members.

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[16]Russert, M. G., & Frey, J. L. (1991). The PACT vocational model: A step into the future. Psychosocial Rehabilitation Journal, 14(4), 7-18.

Becker, D. R., & Drake, R. E. (1994). Community Mental Health Journal, 30(2), 193-212.

Unpublished paper: Drake, R. E., Becker, D. R., Biesanz, J., Torrey, W. C., McHugo, G. J., & Wyzik, P. F. (1994). Rehabilitative Day Treatment vs. Supported Employment: I. Vocational Outcomes. In New Hampshire-Dartmouth Psychiatric Research Center, Concord.

7. IN A CAPITATED SYSTEM "MEMBERSHIP" AND "SCOPE OF SERVICES" NEED CLEAR DEFINITION.

The concept of life-long membership in an ISA needs refinement.

The demonstration raised two issues about the concept of lifelong membership. First, payers may want to "graduate" members who consistently use a level of service costing far less than the capitation rate to a less-intensive level of service. Developing tiered capitation payments related to level of need may be an alternative that maintains the continuity of ISA responsibility.

A non-monetary issue concerns client dependence on an inevitably stigmatizing service system. One of the clearest demonstration results was the increased member reliance on ISA staff for both material needs and emotional support. Long-term recovery will require that this dependence on professionals be replaced by a gradual shift to informal supports. The ability to accomplish this within an ISA membership structure will be a challenge for maturing ISAs.

More formal definitions of minimum services, scope of benefits, and active membership will avert difficulties.

Replications of the ISA model that serve a *cross-section* of the seriously mentally ill need to establish minimal service standards, to ensure both that capitation payments are earned and that all members benefit from enhanced rehabilitative efforts. Standards for "active" membership will need to be clarified in a way that balances the need for programs to maintain continuity of contact through periods of disengagement with the need to prevent capitation payments for clients not benefiting from any service. The SISA experience demonstrates that the new model alone does not guarantee that some clients will not receive minimal levels of service.

The scope of benefits was loosely defined in the ISA demonstrations. The ISA's responsibility for rehabilitation, education, and physical health services will need to be

more clearly specified in future replications, particularly if funding levels are not as generous as in this demonstration.

8. REPLICATIONS OF THE CROSS-SECTION ISA MODEL SHOULD HAVE AT LEAST 200 MEMBERS.

The Lewin-VHI March 1993 report contained estimates by Village staff of how much the average per-member costs for the ISA model with a *cross-section* population could be reduced by a mature, well-run ISA if the membership were expanded to 200.[17] The Village estimated reductions of about one-third in the capitation cost — down to $12,612 (in FY 1992-93 dollars).

Village administrators note two other reasons for a larger membership. Both clients and staff get "stale" with too few members. And in-house structured programs (which appear most effective) need a larger membership to justify specialized staff. For example, the Village has found that 100 clients is too few to keep all job slots filled in their client-staffed businesses.

[17]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. Pages 246-249.

CHAPTER FOUR

LESSONS STILL TO BE LEARNED

Despite an excellent study design, a three year period to measure outcomes, two quite different sites, and excellent cooperation by all participants, much remains to be learned. Because of specific demonstration features — particularly the choice of a cross-section population and the level of service funding — the ISA demonstration offers only indirect evidence on a number of critical policy and service issues. In this chapter we highlight the most important ways of varying the model in order to discover its full potential.

SUMMARY OF LESSONS TO BE LEARNED

LESSON TO BE LEARNED 1:
WHAT IS THE OPTIMUM BALANCE BETWEEN BENEFITS AND COSTS IN A CROSS-SECTION ISA?

LESSON TO BE LEARNED 2
HOW GENERALIZABLE IS THE MODEL?

LESSON TO BE LEARNED 3:
WOULD CHANGES IN THE CAPITATION MECHANISM PRODUCE BETTER RESULTS?

LESSON TO BE LEARNED 1:

WHAT IS THE OPTIMUM BALANCE BETWEEN BENEFITS AND COSTS IN A CROSS-SECTION ISA?

Replications of the ISA model with capitation rates similar to the usual system costs would be very informative.

A critical question is how much the higher level of funding contributed to the success of the ISAs. Replicating the ISA model in its entirety at a capitation rate tied to the membership's previous service costs would help us understand the extent to which comparable results could be attained without higher costs. On the basis of the Village's experience, it is unlikely that a rehabilitatively oriented ISA could operate at less than $10,000 — $12,000 per member. In order to base the test on "no increase in funds" to the system, one would have to restrict membership to clients whose baseline costs were in this range.[18]

ISAs providing rehabilitation for cross-section populations are likely to be replicated on a large scale only if there is only minimal increase in overall costs. The above test, therefore, is important in establishing realistic performance benchmarks for ISAs serving close to a cross-section of clients with severe and persistent mental illness.

More information about results for high and low cost members will help in decisions about the allocation of expenditures among ISA members.

[18]After this report was written we were informed that SISA will itself be restructured to have 300 clients, a capitation rate of around $11,000 and a population of both high-users and cross-section clients. This modification of the original design presents a unique opportunity to understand the relationship between organizational structure, size of population, nature of population and capitation rate.

Any capitated system must deal with the distribution of dollars among its enrollees. The demonstration highlighted the shift toward a flatter distribution of resources at both ISAs, but most notably at the Village. Village data begin to provide information on the limits of the usefulness of very high expenditures on rehabilitative services.

The Village offered an unparalleled test of the hypothesis that very high expenditures on rehabilitative services will produce strong outcomes. As noted above, two thirds of the costs for the 20 percent of the Village members who had the highest expenditures in FY 91-92 were for case management and employment services. All of these members had mental health costs above $27,000 with a mean cost of nearly $41,000.

The results for this 20 percent of members were not clearly better than for the balance of the membership. A significantly higher percentage tried work, but did not have higher wages. The top 20 percent were more satisfied with services generally and rated their quality of life higher; but there were no differences on other outcome measures, and the group had a significantly higher number of hospital days.

The issue of diminishing returns is raised by the relationship between wages earned and the level of expenditures on employment services at the Village. FY 91-92 expenditures per client on employment range from under one hundred dollars to over $60,000. If wages are regarded as a return on vocational expenditures, the return drops sharply. On the basis of the actual expenditure pattern, we can predict that it takes $3,700 in services to generate $750 in wages, while $1,500 in wages requires $14,500 in services.[19]

Within a capitated system the benefits of these high levels of expenditures on rehabilitative services for a relatively few clients need to be weighed against the benefits that would accrue to the balance of the members through a redistribution of some of these funds.

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[19]These figures are arrived at by regressing FY 91-92 wages on FY 91-92 vocational costs (log-transformed) then comparing the predicted values from the regression model to actual costs.

LESSON TO BE LEARNED 2:

HOW GENERALIZABLE IS THE MODEL?

The ISA model as implemented in this demonstration produces a better system of care for a cross-section of clients with serious mental illness. How applicable this model is to other populations is an open question as is how modifications in the model will affect its success.

Los Angeles, Alameda, and Sacramento Counties have all established at least one ISA. These replications have different goals, populations and model elements than do the demonstration ISAs. Each of these replication models focuses on the county's highest cost clients as opposed to a cross-section. Rehabilitation is secondary to reducing the use of expensive 24-hour services and simply maintaining clients in the community. The replications have a smaller size, do not generally accept full risk, and perhaps most importantly, lack simulated funding consolidation and so must bill fee-for-service for at least a part of their support. Only two of the replications are fully voluntary — a design component the Village views as critical for success.

LESSON TO BE LEARNED 3:

WOULD CHANGES IN THE CAPITATION MECHANISM PRODUCE BETTER RESULTS?

AB 3777 envisaged the state Department of Mental Health taking the initiative to coordinate a state-level effort to consolidate not only mental health funding but also other public funding streams that support persons with serious and persistent mental illness. Two pilot projects would be quite useful in determining the extent to which such broader consolidation efforts are needed to produce the most cost-effective outcomes.

- *Include living subsidy in capitation.* The SSI and other entitlements can serve as impediments to change. Including these benefits in the capitation rate, with an accompanying responsibility to ensure adequate housing for members, would allow for a test of whether this would result in better outcomes, particularly in living situation and employment domains.

- *Include the physical health benefit in the capitation.* The high cost of physical health care (Tables 1A-1B) highlights the importance of the relationship between physical and mental health services in capitated arrangements with this population. A pilot program that tested giving the physical health responsibility for a set of clients to an ISA-type plan would clearly align incentives to reduce the incidence or consequences of high-cost physical health problems.

CHAPTER FIVE:

CONCLUSIONS

The demonstration shows that the ISA model, when implemented well with a cross-section population and higher-than-average funding, produces an improved service system.

The Village resolved the three major service system problems that led to its initiation and provided services which were more acceptable and helpful to both clients and their families. By most service system performance criteria, it would be deemed a success.

SISA, because of implementation problems and leadership less skilled and experienced in psychiatric rehabilitation yielded a service system that was superior to the usual system, but failed to realize the full potential of system reform possible with the ISA model.

But one must also look beyond performance indicators in evaluating the success of the demonstration model. The ultimate purpose of the system reforms is to attain better rehabilitative outcomes for the clients. And with the increasing need to manage scarce resources, one cannot look at the ISA achievements without considering cost.

The client outcomes at the Village represent the best achieved to date — in California or elsewhere.

Because results at SISA are compromised by organizational problems we use outcomes at the Village as indicative of what the ISA model is capable of. Judging by published reports, the client outcomes of the Village are unequaled in other demonstration programs.[20]

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[20]More extensive discussion of these points is contained in the Lewin-VHI Final Report, *op cit.*

- Although difficult to compare because of a low baseline rate in Long Beach, the lower and more appropriate use of hospital care shown by the Village appears as impressive as changes in utilization shown by other Madison-type models. The SISA reductions are quite comparable to other Madison-type programs.

- Employment results at the Village exceed those of programs reported in the literature on controlled studies, particularly for a cross-section of clients.

- Controlled studies have shown little success on most other outcome measures.[21] Although comparisons are difficult, the Village achievement of outcomes in multiple domains is highly unusual.

The Village outcomes are impressive. Yet, with the increasing need to manage scarce resources, they must be viewed together with the costs of achieving them.

Decisions about the success of the ISA model ultimately depend on whether the value one places on the benefits to clients justifies the added public costs.

In this demonstration the public mental health costs were very high relative to the usual system so that *substantial change* in client outcomes should be expected and clearly was anticipated by the model originators. While the pattern of rehabilitative outcomes was better than attained in the usual system, one can question whether the differences were of enough magnitude to warrant the extent of the added expenditure. From a strictly monetary perspective the outcomes did not offset costs. And the lack of substantial improvements in many important quality of life domains such as income levels, victimization, and self-esteem is discouraging.

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[21]Reviewing 11 studies, Olfson found reduced clinical symptoms in two studies, improved global functioning in one, improved social functioning in one, fewer legal problems in four, improved vocational outcomes in two, and increased residential independence and reduced homelessness in one: Olfson M: Assertive community treatment: an evaluation of the experimental evidence. Hospital and Community Psychiatry 41:634-641, 1990

The state Department of Mental Health, the Planning Council, and other constituencies have a continuing obligation to refine and expand our knowledge of cost-effective systems of care.

While service responsibility in California now rests with county mental health departments, state-level constituencies have a responsiblity for advancing knowledge about the cost effectiveness of various service models. As counties throughout the state reorganize their systems of care in response to budget constraints and Medi-Cal managed care, it is likely that there will be more ISAs, especially for high users. The state-level constituencies should foster and help obtain funding for well-designed evaluations and ensure that the results are coordinated and broadly disseminated. The greater the decentralization of service provision, the more important are centrally coordinated efforts to increase knowledge about cost-effective models.

The ISAs, and particularly the Village, show us that better services are possible, that improved outcomes in many domains are achievable, *and* that we still have a long way to go before we know what will help most seriously mentally ill clients achieve recovery in a cost-effective manner.

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 ISA model entails comparisons of individual outcomes and costs for demonstration clients served by the ISAs with those of comparison clients served in the "usual" mental health system. In Long Beach, the study group consisted of 102 Village members and 108 comparison clients. In Stanislaus, the group consisted of 115 SISA members and 114 comparison clients.[21] Additionally, for outcome and cost measures that rely on information from computerized data banks, change from the baseline period (FY 89-90) to the study period is calculated. Thus, the design incorporates direct comparisons between demonstration and comparison groups during the study period as well as change over time by the demonstration clients.

The demonstration and comparison groups studied in the ISA evaluations are comparable.

The comparability of the demonstration and comparison groups for the ISAs was ensured by the manner in which clients were selected. Applicants to the ISAs agreed initially to be part of the study. Once selected, clients were randomly assigned to either the ISA or the comparison group.

The characteristics of the study samples are shown in Appendix A, Exhibits 1 and 2. Subsequent review of the ISA and comparison group characteristics confirms that client attrition from the study over the three years did not significantly bias this comparability.

[21]The numbers in different analyses differ due to attrition and to varying data sources. A few clients withheld consent for us to access some databases.

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.[22]

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 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 staff survey to both ISA staff and staff in county programs serving the comparison clients. The CPPS was administered again in September of 1994.[23]

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[22] 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.

[23] 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

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 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.

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.* The ISA staff time and ISA purchases of services were classified into Short-Doyle service categories to allow for comparison with county mental health programs serving the comparison clients. This coding scheme is not well-matched to the more varied and informal tasks undertaken by ISA staff. Comparability in the areas of vocational and socialization services is particularly problematic.

- *Unavailability of ISA client costs in FY 90-91.* The management information system used to record staff time spent with particular clients and to capture all member-specific purchases of services was not fully implemented in FY 90-91. Reconstruction of purchases of services was possible for major cost categories such as 24-hour care, but most member-specific cost information was not available until FY 91-92.

- *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.

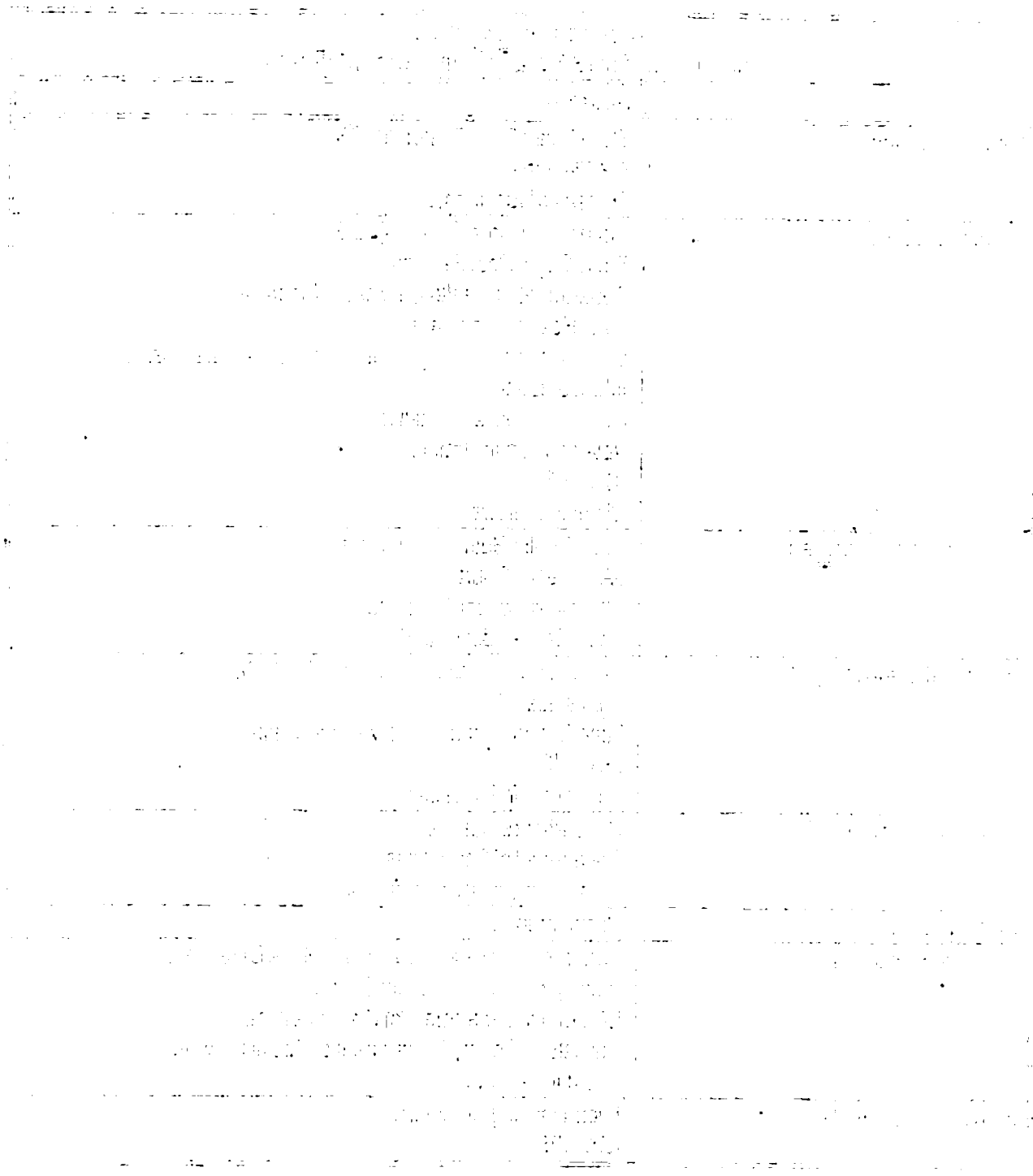
Appendix A Exhibit 1:
Baseline demographic data

Characteristic	Long Beach				Stanislaus			
	Village (N=102)		Comparison (N=108)		SISA (N=115)		Comparison (N=114)	
	N	%	N	%	N	%	N	%
Over 45 years old	28	27.5	34	31.5	33	28.7	38	33.3
Female	37	36.3	53	49.1	60	52.2	63	55.3
White	69	67.7	73	67.6	92	80.0	92	80.7
With diagnosis of schizophrenia	53	52.0	63	58.3	79	68.7	73	64.0
Ever married	49	48.0	50	46.3	50	43.5	59	51.8

Appendix A Exhibit 2:
Baseline objective data

1990 Characteristic	Long Beach				Stanislaus			
	Village (N=83)		Comparison (N=90)		SISA (N=108)		Comparison (N=106)	
	N	%	N	%	N	%	N	%
In hospital at any time for short-term stay	16	19.3	24	26.7	44	40.7	36	34.0
In hospital at any time for long-term stay	5	6.0	5	5.6	8	7.4	6	5.7
Arrested	2	2.4	7	7.8	12	11.1	6	5.7
Convicted	0	0.0	4	4.4	8	7.4	3	2.8
Received SSI	60	72.3	68	75.6	94	87.0	90	84.9
Worked at any time	9	10.8	11	12.2	17	15.7	10	9.4

Appendix A Exhibit 3: Data sources for ISA's and comparison clients	
Type	**Sources**
Demographics	State Client Data System (CDS) ISA Records 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 ISA MIS Client Interviews
Involuntary Treatment	Local Public Guardian's Offices LA Superior Court Stanislaus Patient Advocate Short-Doyle Cost Reports
Physical Health	Department of Health Services – Medi-Cal Stanislaus MIA Long Beach Comprehensive Care Center ISA MIS Veterans Administration
Criminal Justice	Department of Justice Department of Corrections Stanislaus County Sheriffs Office
Social Services	Client Interviews
Income Supports	Department of Health Services – State Data Transfer File Employment Development Department LA County Department of Social Services Stanislaus County Department of Social Services Client Interviews
Housing Supports	Local Housing Authorities ISA MIS



APPENDIX B

EXHIBITS

EXHIBITS

Appendix B, Exhibit 1:
Long Beach: Responses to interview questions regarding continuity of care

Number responding "yes" to:	Village N	Village %	Comparison N	Comparison %	Significance (χ2 test) p=
Do you have the name and phone number of a mental health worker to help with crises after hours (*not* a crisis clinic)?					
Round 1	75	80.7	17	18.5	0.000*
Round 2	82	93.2	13	19.1	0.000
Round 3	66	90.4	8	15.1	0.000
Did you ever call mental health worker for help in the last 6 months?					
Round 1	32	35.6	7	7.6	0.000
Round 2	33	37.5	2	3.0	0.000
Round 3	30	41.1	2	3.9	0.000

*0.000 indicates there is less than a one in a thousand chance that the observed difference is due to chance variation.

Appendix B, Exhibit 2:
Stanislaus: Responses to interview questions regarding continuity of care

Number responding "yes" to:	Village N	Village %	Comparison N	Comparison %	Significance (χ2 test) p=
Do you have the name and phone number of a mental health worker to help with crises after hours (*not* a crisis clinic)?					
Round 1	61	64.9	14	17.3	0.000*
Round 2	77	88.5	5	8.6	0.000
Round 3	70	90.9	11	18.3	0.000
Did you ever call mental health worker for help in the last 6 months?					
Round 1	35	37.2	6	7.4	0.000
Round 2	34	40.0	3	5.2	0.000
Round 3	38	50.0	4	6.7	0.000

*0.000 indicates there is less than a one in a thousand chance that the observed difference is due to chance variation.

Appendix B, Exhibit 3:
Long Beach: The one person client counted on most during previous six months

	Round One				Round Two				Round Three			
	Demonstration		Comparison		Demonstration		Comparison		Demonstration		Comparison	
	N	%	N	%	N	%	N	%	N	%	N	%
Family	27	29.7	39	42.4	22	25.0	23	31.5	23	28.0	24	36.9
Friend	12	13.2	16	17.4	14	15.9	21	28.8	18	22.0	18	27.7
Profess-ional	46	50.5	21	22.8	48	54.5	19	28.0	35	42.7	9	13.8
No-one	6	6.6	16	17.4	4	4.6	10	13.7	6	7.2	14	21.5
Total	91	100.0	92	100.0	88	100.0	73	100.0	82	100.0	65	100.0
Signifi-cance	Chi-square: p=0.001				Chi-square: p=0.002				Chi-square: p=0.001			

Appendix B, Exhibit 4:
Stanislaus: The one person client counted on most during previous six months

	Round One				Round Two				Round Three			
	Demonstration		Comparison		Demonstration		Comparison		Demonstration		Comparison	
	N	%	N	%	N	%	N	%	N	%	N	%
Family	31	30.7	34	37	25	25.5	34	42.0	26	29.9	20	29.9
Friend	15	14.9	12	13.0	12	12.2	13	16.0	15	17.2	5	7.46
Profess-ional	46	45.5	27	29.3	54	55.1	22	27.2	36	41.4	23	34.3
No-one	9	8.9	19	20.7	7	7.1	12	14.8	10	11.5	19	28.4
Total	101	100.0	92	100.0	98	100.0	81	100.0	87	100.0	67	100.0
Signifi-cance	Chi-square: p=0.035				Chi-square: p=0.002				Chi-square: p=0.029			

Appendix B, Exhibit 5:

Demonstration versus comparison expenditure patterns: percent of total dollars spent on each type of service FY 91-92

	Demonstration Percent of total	Comparison Percent of total
Long Beach		
Case management	40.6	10.1
Day tx	0.2	1.0
Medications	11.2	10.2
Residential	0.3	2.1
Socialization	11.6	1.2
Outpatient therapy	4.7	23.2
Vocational	25.1	1.3
Acute hospital	5.1	27.9
Long-term care	1.3	23.1
Stanislaus		
Case management	46.8	14.5
Day tx	2.6	10.4
Medications	11.6	13.0
Residential	4.9	7.9
Socialization	0.5	0.0
Outpatient therapy	12.3	8.4
Vocational	2.4	1.8
Acute hospital	9.0	33.6
Long-term care	9.9	9.9

Appendix B, Exhibit 6:
Long Beach: Mean and total conservatorship days for each study year and two years combined

	Demonstration				Comparison			
		Mean Days		Total Days		Mean Days		Total Days
	N	Mean	S.D.		N	Mean	S.D.	
Baseline	83	1.12	5.90	93	90	0.82	5.25	74
FY 90-91	102	0.53	5.35	54	101	6.43	40.49	650
FY 91-92	99	0.36	3.62	36	92	10.70	59.38	984
2 Study Years	99	0.91+	6.49	183	90	18.16+	99.56	1,708

+Mean days for those present all three years.

Appendix B, Exhibit 7:
Stanislaus: Mean and total conservatorship days for each study year and two years combined

	Demonstration				Comparison			
		Mean Days		Total Days		Mean Days		Total Days
	N	Mean	S.D.		N	Mean	S.D.	
Baseline	108	30.35	95.62	3,278	106	35.66	100.32	3,780
FY 90-91	115	17.67	76.84	2,032	108	28.46	95.06	3,074
FY 91-92	111	15.32	71.70	1,700	103	28.99	95.68	2,986
2 Study Years	111	31.76	147.30+	7,010	102	59.41+	188.38	9,840

+Mean days for those present all three years.

Appendix B, Exhibit 8:
Interview respondents reporting lack of money for essentials

	Demonstration		Comparison		Significance (χ^2 test)
	N	%	N	%	p=
Long Beach					
Round 1	32	33.7	39	40.6	0.322
Round 2	33	36.7	32	43.8	0.354
Round 3	27	32.5	30	43.5	0.166
Stanislaus					
Round 1	25	24.0	29	31.5	0.243
Round 2	17	17.0	11	13.9	0.575
Round 3	14	15.9	16	23.5	0.233

Appendix B, Exhibit 9:
Interviewer judgments of percent with no observable symptoms

	Demonstration		Comparison		Significance (χ^2 test)
	N	%	N	%	p=
Long Beach					
Round 1	95	84.2	97	78.4	0.298
Round 2	89	76.4	76	76.3	0.989
Round 3	82	87.8	69	71.0	0.010
Stanislaus					
Round 1	107	77.6	96	79.2	0.783
Round 2	100	56.4	79	64.6	0.246
Round 3	92	60.9	72	48.6	0.117

Appendix B, Exhibit 10:
Percent living under federal poverty standard in each year

	Demonstration		Comparison		Significance (χ^2 test)
	N	%	N	%	p=
Long Beach					
FY 90-91	23	24.5	28	39.1	0.750
FY 91-92	17	18.7	18	24.7	0.353
FY 92-93	26	31.3	23	34.8	0.649
Stanislaus					
FY 90-91	25	23.1	24	25.3	0.725
FY 91-92	20	19.6	19	23.5	0.528
FY 92-93	31	33.7	13	18.1	0.025

Appendix B, Exhibit 11:
Interview respondents reporting being victim of crime in prior six months

	Demonstration		Comparison		Significance (χ^2 Test)
	N	%	N	%	p=
Long Beach					
Round 1	23	24.2	38	40.9	0.015
Round 2	26	29.5	16	22.9	0.345
Round 3	24	32.9	15	28.3	0.583
Stanislaus					
Round 1	21	21.6	19	23.5	0.774
Round 2	23	26.7	16	26.7	0.997
Round 3	20	25.6	15	24.6	0.887

Appendix B, Exhibit 12:

Long Beach: Percent of clients with detention (arrests or warrant) during study years and percent with convictions.

	Detentions				Convictions			
	Demonstration		Comparison		Demonstration		Comparison	
	N	Percent	N	Percent	N	Percent	N	Percent
FY 90-91	102	8.8	101	10.9	102	3.9	101	6.9
FY 91-92	99	8.1	92	7.6	99	4.0	92	4.4
FY 92-93	95	4.2	86	5.8	95	1.0	86	3.5
All Three Years+	95	14.7	85	18.8	95	7.4	85	11.8

+Only those clients present for all three years are included in this total.

Appendix B, Exhibit 13:

Stanislaus: Percent of clients with detention (arrests or warrant) during study years and percent with convictions.

	Detentions				Convictions			
	Demonstration		Comparison		Demonstration		Comparison	
	N	Percent	N	Percent	N	Percent	N	Percent
FY 90-91	115	7.8	108	8.3	115	3.5	108	5.6
FY 91-92	111	7.2	103	9.7	111	4.5	103	5.8
FY 92-93	105	7.6	97	8.2	105	1.9	97	2.1
All Three Years+	105	20.0	96	16.7	105	8.6	96	11.5

+Only those clients present for all three years are included in this total.

Exhibit 14:

Average wages earned in each year and for all three years combined, in dollars.

	Long Beach				Stanislaus			
	Demonstration		Comparison		Demonstration		Comparison	
	N	Wages	N	Wages	N	Wages	N	Wages
Baseline	83	$259	90	$687	108	$121	106	$92
90-91	102	602***	101	235	115	226***	108	180
91-92	99	1,086***	92	414	111	329*	103	210
92-93	95	1,135***	86	737	105	233***	97	274
All Three Years	95	$2,858***	85	$1,435	105	$783***	96	$701

***= p of less than .01. (Wilcoxon rank-sum test)
**=p of less than .05
*=p of ≤ than .10