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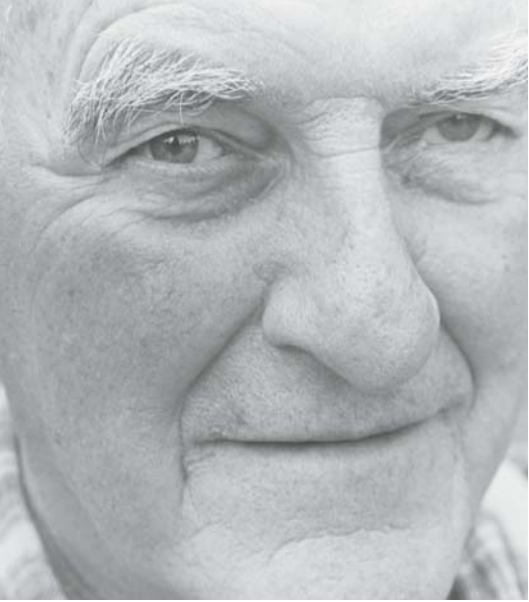
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The Effect of Peer Support On Recidivism Rates for Mental Health Hospital Admissions and Crisis Stabilization Episodes

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I. Background

Georgia's Real Choice Systems Change Grant

Since 2002, Georgia received a total of \$3,319,319 federal dollars under the Real Choice System Change Grant: \$1,027,211 in 2001 for Nursing Facility Transition; \$1,385,000 in 2002; and \$907,108 in 2003 to support the Independence Plus Initiative and Quality Assurance and Quality Improvement in Home and Community Based Services. Additionally, in 2004, Georgia's Department of Human Resources, Department of Community Health, and Department of Community Affairs applied for Real Choice System Change Grants to support housing transition programs and initiatives.

A stakeholder group including consumers, family members, representatives from state organizations, service providers, and advocacy groups defined the goals of Georgia's 2004 Real Choice Systems Change Grant. Four project goals were developed to support Georgia's grant proposal:

- Address system barriers to integrated community living;
- Develop an ongoing mechanism for consumer involvement in all aspects of the integrated community service delivery system for elderly people and people with disabilities;
- Develop a process for effective communication and collaboration to enhance planning and implementation of integrated community services system changes¹; and,
- Ensure an accessible, integrated community service system for elderly people and people with disabilities.

Georgia's overall intent was to facilitate the design and implementation of effective and enduring improvements in the state's community long-term care systems. These improvements were to enable individuals of all ages with disabilities or long-term illnesses to participate in their communities.

A portion of the four-year effort concentrated on the design and implementation of long-term care service arrays and peer-support mechanisms. These services now contribute to deinstitutionalization and facilitate community living.

Peer-Support Objectives

The following grant objectives were achieved:

- A full-time Recovery Support Specialist to provide statewide support and technical assistance to Georgia's Certified Peer Support Specialists for three years;
- Curricula for Mental Health Peer Specialists working in hospitals and those working with people transitioning out of institutions;
- Three Peer Support training documents for people with developmental and physical disabilities: Facilitator's Training Guide, Participant's Training Guide, and a collection of readings and contacts for participants;
- Seven Peer Support training pilots for 97 participants with developmental and physical disabilities;

- A report and evaluation on Peer Support training for people with developmental and physical disabilities;
- A website for people with developmental and physical disabilities who participated in Peer Support;
- Continuing education training modules for people with developmental and physical disabilities to increase, refine, and refresh skills and determine best practices;
- A Peer Support Code of Ethics for people with developmental and physical disabilities;
- A feasibility study for an Elderly Peer Support project.

The Georgia Certified Peer Support Program

Based on principles of recovery and self-determination, the Georgia Certified Peer Support Program (the Program) provides intensive training, testing, certification, continuing education, and ongoing support to current clients who wish to provide similar support to other persons in managing their mental illness-related challenges. These clients are trained as Certified Peer Specialists (CPSs). The Program specifically trains and supports participants in using skills to inspire hope, to engage the adult mental health consumer in creating and achieving recovery/life goals, and to orient the mental health system toward recovery.

The CPSs partner with clinically trained mental health providers around an array of services provided by Georgia’s community based mental health agencies that include Assertive Community Treatment (ACT), Community Support Individual (CSI) and Team (CST), Psychosocial Rehabilitation (PSR) and Peer Support services.

For students, the Program targets individuals who self-identify as former or current consumers of mental health or dual diagnosis services; are well grounded in their own recovery experience; hold a high school diploma or GED; demonstrate basic reading comprehension and written communication skills; and have demonstrated experience with leadership, including advocacy, or the creation or implementation of peer-to-peer services.

The CPS Program core faculty, joined by CPS “guest” trainers, present experiential training to the students over a two-week period. Participants receive workbooks and audio training tapes, a Participant’s Manual with handouts that can be used on the job, a Facilitator’s Guide, and a directory of community-wide support resources.

Certification testing consists of written and oral components. Trained participants and CPSs are invited to attend regular continuing education meetings. In addition to continuing education, this unique workforce is also supported by technology-based and face-to-face technical assistance, consultation, and peer support.

The Program increases the number of credentialed staff available to serve mental health consumers by utilizing a previously untapped group of individuals - those with lived experience of mental illness and the accompanying stigma associated with such diagnoses. Because of their lived experience, CPSs have a unique ability to gain the confidence and trust of individuals in treatment settings and to assist them to move beyond the disabling consequences of both the illness and the negative beliefs that often accompany the diagnosis of a mental illness.

CPSs provide services targeted at helping their clients to be fully empowered partners in service, recovery, and life planning and to fulfill their own needs and wants, including attainment of the skills, resources, and supports that will enable them to live and work in the community of their choice. CPS presence in the traditional behavioral health workforce serves to reduce stigma and promote and develop consumer-directed, recovery-oriented services.

The Program places as much importance on lived experience with mental illness and recovery as on academic preparation for serving individuals with mental illness. It recruits participants from within the service system and teaches a skill set that draws on the expertise of their lived experience to provide services that promote and facilitate consumer involvement and direction in their own recovery. Retention of CPSs is supported through the fostering of CPS peer relationships through a CPS web-based bulletin board, email list-serve, and continuous personal consultation and technical assistance by CPS Project staff.

Georgia Peer-Support Program Effectiveness

The Georgia Peer Support program has been in place long enough to produce results against which to evaluate their effects on service utilization and cost. There is particular interest in use and costs of inpatient mental health hospitals and crisis stabilization services. Because of this interest, a study measuring the effects of peer support was proposed by the Georgia Health Policy Center at Georgia State University.

On June 1, 2006, the Georgia Department of Human Resources contracted with the Center for the proposed study. Three mental health services are examined^v:

Inpatient Psychiatric Services: A short-term stay in a licensed and accredited state-owned hospital for the treatment or habilitation of a psychiatric and/or substance related disorder. Services are of short duration and provide treatment for an acute psychiatric or behavioral episode.

Community Based Inpatient Psychiatric Services: A short-term stay in a licensed and accredited community based hospital for the treatment or habilitation of a psychiatric and/or substance related disorder. Services are of short duration and provide treatment for an acute psychiatric or behavioral episode. (Community based inpatient psychiatric services are used when state hospitals are not available.)

Crisis Stabilization Episode: A residential alternative to or diversion from inpatient hospitalization, offering psychiatric stabilization and detoxification services. The program provides medically monitored residential services for the purpose of providing psychiatric stabilization and substance detoxification services on a short-term basis.

II. Study Rationale

In a 1999 decision, the U.S. Supreme Court affirmed the right of individuals with disabilities to live in the least restrictive environment opposed to the more traditional practice of institutionalization. This decision^{vi} legally crystallized a long-standing community debate and quickly led to systematic efforts to deinstitutionalize individuals with disabilities and to appropriately and selectively prevent future institutionalizations. The basis for deinstitutionalization has two general considerations:

1. The capacity of the disabled individual to function effectively within a community environment; and,
2. The cost-effectiveness of the community environment vis-à-vis institutions.

The rationale for this study emerges from both of these bases. It is hoped this study will provide insight into:

1. The capacity of mental health clients, over time, to function without institutional and/or crisis stabilization services;
2. The additional costs of institutionalizing clients as opposed to community environments; and,
3. The degree to which the Georgia Peer Support Program facilitates the ability of clients to cost-effectively function in the community.

III. Study Objective and Design

Objective

The recidivism study documents the Georgia Peer Support program's ability to affect mental health clients' state mental health hospitalizations and/or crisis stabilization episodes. Hypotheses include:

- Does the use of Peer Support increase, decrease, or hold constant episodes of institutionalization and/or crisis stabilization when compared to non-users of Peer Support?
- Are differences significant between the user and non-user groups?
- What are the cost experiences of the two groups?

Design

The study's design is illustrated in Figure 1.

Figure 1

Use of Peer Support Services

| | | YES | NO |
|--------------------------------------------------------------|-----|-----|----|
| Use of Inpatient and/or Crisis Stabilization Services | YES | | |
| | NO | | |

Ideally, observations should indicate that consumers of Peer Support Services (YES) do not use (NO) inpatient or crisis stabilization services.

The ideal seldom is found in reality. Therefore, the study uses a comparison group identical to the Peer Support group along multiple dimensions except for their use of Peer Support (NO). It is anticipated that if Peer Support is effective in controlling recidivism, clients not using Peer Support Services will use inpatient mental health and crisis stabilization services at significantly higher rates.

IV. Study Databases

Administrative Data

The study uses administrative data as its analytic base. The investigators recognize that the use of administrative data for research purposes has certain limitations.^{viii} However, in addition to supporting analytic needs, the use of administrative data also gives the study's investigators an opportunity to determine the sufficiency of the existing administrative databases to support continual monitoring of the Peer Support program's cost and effectiveness.

Georgia Medicaid Claims File

At the out-set of the study, the Georgia Medicaid Claims file was available for analytic purposes. The Medicaid database excludes state inpatient mental health hospital data and crisis stabilization data. Therefore, the Information Management Unit of MHDDAD made claims records from two other administrative databases available to the researchers. These provided information on clients' use of crisis stabilization services and state inpatient mental health hospital services.

MHDDAD Community Information System (MHMRIS) This database includes crisis stabilization claims.

MHDDAD Hospital Information System (BHIS) This database includes state inpatient mental health hospital claims.

Figure 2 summarizes characteristics of the three databases.

Figure 2
Characteristic of the Study's
Three Databases

| Characteristic | Databases | | |
|---------------------------------------------------|----------------------|-------------------------------------|------------------------------------|
| | Medicaid Claims File | MHDDAD Community Information System | MHDDAD Hospital Information System |
| Database source | DCH | DHR | DHR |
| Data content groups/items: (YES/NO) | | | |
| • Inpatient | YES | YES – Crisis Stabilization only | YES |
| • Outpatient/ambulatory | YES | NO | NO |
| • State inpatient mental health hospital | NO | NO | YES |
| • Other public hospital | YES | NO | NO |
| • Public ambulatory service | YES | NO | NO |
| • Non-public hospital | YES | NO | YES - Limited |
| • Non-public ambulatory services | YES | NO | NO |
| • All principal diagnoses including mental health | YES | NO | NO |
| • Mental health diagnoses only | NO | YES | YES |
| • COS 440 | YES | NO – Service Specific | NO – Service Specific |
| Peer support services procedure code Y3022 | YES | NO – Service Specific | NO – Service Specific |
| • Associated diagnoses | YES | NO | NO |
| • Costs | | | |
| ○ Per diem | NO | YES | YES |
| ○ Per unit | YES | NO | NO |
| • Patient demographics - other: | | | |
| ○ Age/DOB | YES | YES | YES |
| ○ LOS | Can be built | YES | YES |
| ○ Rural/urban | Can be built | NO | NO |

Database Integration And Observations

In a cooperative effort between the Georgia Health Policy Center and the Georgia Division of Human Resources MHDDAD Information Management Unit, the three databases were searched for common clients and related claims for calendar years 2003 and 2004.^{xii} The linkage was initiated by selecting all Medicaid clients with at least one COS 440 claim^{xiii} during the study period. The data were then segregated into those clients who had Peer Support claims in CY 2003 and CY2004 and those who did not. All clients under the age of 18 were removed from the data, as they are not eligible for Peer Support Service.

These data were then matched against with the two MHDDAD databases to identify claims within the DHR files. The claims identified through this integration process serve as the overall study database. The size of the study cohort is 35,668 clients age 18 and over who have at least one COS 440 claim during CY2003 and CY2004.

**Figure 3
Clients with Community Mental Health Claims (COS 440) Using Peer Support Services
and Those Not Using Peer Support Services**

| Gender | With Peer Support (N=1,910) | | Without Peer Support (N=33,758) | |
|-------------------------|------------------------------------|-------|----------------------------------------|-------|
| Female | 1,040 | 54.5% | 23,288 | 69.0% |
| Male | 870 | 45.5% | 10,470 | 31.0% |
| Race | | | | |
| White | 821 | 43.0% | 15,836 | 46.9% |
| Non-White | 907 | 47.5% | 15,547 | 46.1% |
| Missing | 182 | 9.5% | 2,375 | 7.0% |
| Age Group | | | | |
| 18-44 | 967 | 50.6% | 21,880 | 64.8% |
| 45-64 | 827 | 43.3% | 10,575 | 31.3% |
| 65+ | 116 | 6.1% | 1,303 | 3.9% |
| Client Residence | | | | |
| Rural | 1,001 | 52.4% | 15,456 | 45.8% |
| Urban | 909 | 47.6% | 18,302 | 54.2% |
| Age | | | | |
| Mean | 44.7 | | 39.6 | |
| Median | 44 | | 39 | |

Demographic Observations

Women are the majority in both the user and non-user groups. Non-whites predominate among both users and non-users. In terms of age, the non-users tend to be younger. More rural residents appear to use Peer Support than urban residents.

Services by Claim Type

Of the 1,910 Peer Support clients, 100 percent have at least one non-ER outpatient visit, 58 percent have an ER visit; 31 percent have an inpatient hospital claim; and two percent have a nursing facility claim.

The Control Group

As illustrated in Figure 3, the majority of COS 440 clients (95%) did not use Peer Support Services. However, the study's focus is on the costs and outcomes of the Peer Support group rather than their quantity. Most importantly, does the use of Peer Support result in less use of inpatient mental health or crisis stabilization?

In order to design analyses related to use / non-use of Peer Support, it is necessary to establish two groups. One group is composed of all clients using Peer Support Services - the study group. The other group, clients not using Peer Support, is the control group.

As illustrated in Figure 3, the size of the group not using Peer Support, especially compared to those with Peer Support, is quite large - a factor more than seventeen times greater. Such an imbalance is analytically problematic. To avoid this problem, a sample was drawn from the group not using Peer Support. The two groups were matched on five variables. Four of the variables were demographic:

- Gender: Male and female;
- Race: White, non-white, and missing;
- Age group: 18-44, 45-64, 65 and over;
- Residence: Urban, rural

The fifth variable is diagnosis. Over 85 percent of the principal diagnoses were mental health-related and centered on schizophrenic disorders (295) - 64 percent of the diagnoses - and affective psychoses (296) - 23 percent^{xxii}.

Figure 4 illustrates the distribution of the client variables between the study and control groups after matching.

Figure 4
Study and Control Group Characteristics

| Variable | Study Group (N = 1,910) | Control Group (N = 3,820) |
|---------------------------------------------|----------------------------|------------------------------|
| Gender | | |
| Male | 54.5% | 54.5% |
| Female | 45.5 | 45.5 |
| Race | | |
| White | 43.0 | 43.0 |
| Non-white | 47.5 | 47.5 |
| Missing | 9.5 | 9.5 |
| Age | | |
| 18-44 | 50.6 | 50.6 |
| 45-64 | 43.3 | 43.3 |
| 65+ | 6.1 | 6.1 |
| Client Residence | | |
| Rural | 52.4 | 52.4 |
| Urban | 47.6 | 47.6 |
| Principle Diagnosis ^{xxiii} | | |
| Schizophrenic Disorders (295) | 63.8 | 63.8 |
| Affective psychoses (296) | 23.3 | 23.2 |
| All other | 13.0 | 13.0 |

V. Findings

Mental Health Services

More than 80 percent of the study and control groups did not use inpatient mental health or crisis stabilization services^{xxv} during the CY03 and CY04 period. The difference between the two is not statistically significant.

Mental Health Services Utilization

Figure 5
Average Utilization

| Service Type | Average Number of Admissions | | | Average Length of Stay | | |
|-----------------------------------------------------|------------------------------|---------|--------------------------|------------------------|---------|--------------------------|
| | Study | Control | Statistical Significance | Study | Control | Statistical Significance |
| Community Hospital Inpatient | .04 | .03 | No | 5 | 4.9 | No |
| Crisis Stabilization Episode^{xxvii} | 1.09 | .84 | Yes: $p < .005$ | 7.2 | 6.1 | No |
| State Mental Hospital | 1.35 | 1.58 | Yes: $p < .07$ | 19.2 | 21.5 | No |

There is no difference in the average number of community hospital admissions between the two groups; however, differences do exist for both the use of crisis stabilization and state mental health hospitals. The study group accesses crisis stabilization more and state mental health hospital stays less than the control group, affirming the study's first hypothesis.

No differences are observed between the two groups in lengths of stay.

From regression analysis we observe that clients with Peer Support have a 15 percent lower probability of admission to a state inpatient mental health hospital than clients without Peer Support. Clients with Peer Support have a 33 percent greater probability of a crisis stabilization episode than clients without peer support.

The Use of Peer Support to Manage Physical Health

Peer Support programs support clients with issues related to community living and help them manage their mental health problems. However, there is speculation that Peer Support also improves clients' skills in managing physical health and well-being. The end result is thought to be improved health management behavior, resulting in a lower incidence of physical health problems.

Ambulatory Care Sensitive Conditions (ACSC) are medical conditions that, if appropriately treated on an ambulatory basis, should not require hospitalization. In terms of hospital admissions for non-mental health conditions, no statistically significant differences are observed between the study and control groups. For both groups, 31 percent have at least one hospital admission during the study period. In terms of ACSC incidence among those hospitalizations,

there is no significant difference between the study and control groups: 17.7 percent of the hospitalizations for the study group are for an ACSC. The proportion for the control group is 16.6 percent. The differences are not significant.

VI. Costs

Figure 6
Inpatient Mental Hospital and Crisis Stabilization Costs per Client

| Variable | Study Group | Control Group | Statistical Significance |
|---------------------------|-------------|---------------|--------------------------|
| Inpatient Mental Hospital | \$16,454.43 | \$18,595.34 | No |
| Crisis Stabilization | \$2,404.61 | \$2,400.52 | No |
| Community Inpatient | \$2,011.36 | \$1,829.00 | No |

Across the three mental health services, there are no significant differences in cost between study and control groups for clients who accessed each service.

Figure 7
Medicaid Costs over the 24-Month Period

| Variable | Study Group | Control Group | Statistical Significance |
|-------------------------------------------------------------------------------------|---------------------------|---------------|--------------------------|
| Total Payment per Client | \$ 27,904 ^{xxxi} | \$ 19,926 | p < .0001 |
| Inpatient Hospital, Outpatient Hospital, and Nursing Facility Claims Payment | 3,634 | 4,426 | p < .003 |
| Professional Claims | 13,408 | 7,563 | p < .0001 |
| Rx Claims | 10,861 | 7,937 | p < .0001 |
| Payment per Client per Month | \$1,218 | \$918 | p < .0001 |

With the exception of claims for inpatient hospital, outpatient hospital, and nursing facility services, Medicaid costs were significantly less for the control group than for the study group.

VII. Limitations

1. The Medicaid database is the only database of the three with actual cost information. Inpatient mental health hospitalization costs vary by hospital. Because of this, an average cost of \$388 dollars per day is used in calculating inpatient mental health hospital cost. Community-based inpatient costs are calculated on an average at \$295 per day.
2. Because of time and resource constraints, expansive explorations of initial findings are not possible.

VIII. Conclusions

Previous studies have focused on qualitative outcomes of Peer Support, for example community living skills and job retention. This study is intended to demonstrate whether or not there are reductions in inpatient mental health hospital admissions and crisis stabilization episodes for individuals participating in Peer Support programs.

Eighty percent of the Medicaid population with COS 440 – community mental health services – do not experience a state mental health hospital admission or a crisis stabilization episode during CY2003 or CY2004. This holds for both the study and control groups. Because of data limitations, it is not possible to know if those who were admitted to inpatient mental health hospitals or crisis stabilization had previously been an inpatient.

It is assumed that in selecting institutionalized individuals for discharge into the community there are common criteria that are applied throughout the state. Therefore, the predicted or anticipated ability of clients to effectively function in a community environment will not vary significantly between those who opt for Peer Support versus those who do not. These results indicate such may be the case: both groups experience similarly low proportions of admissions to the mental health system - at least within the observation period of this study.

Given such similarity, it seems that future studies should focus on identifying characteristics of clients who do require use of mental health services and analyzing those characteristics in an attempt to improve community supports.

The study group (those with Peer Support) has a 15 percent lower probability of having a state mental health hospital admission and 33 percent greater probability of experiencing a crisis stabilization episode than the control group (those without Peer Support). There is no statistical difference between the groups in measuring community inpatient stays for mental health.

Apart from the clients who use Peer Support services, the Georgia Peer Support program has created a cadre of mental health services consumers certified to provide peer support services. To date, the program has certified 350 individuals.

While not measured by this study, it is assumed that ancillary benefits accrue to and from the certified peer supporters. Such benefits could perhaps be the basis for future study; however, for the present, they must at least be implicitly considered when weighing the costs and benefits of the current program.

On the acute care side, the only statistically significant differences observed are more professional claims and higher prescription drug utilization for the study group. A future investigation might assess clients hospitalized for ACSC diagnoses in an attempt to determine avenues for the improvement of ambulatory care and/or the education of these clients for more aggressive management.

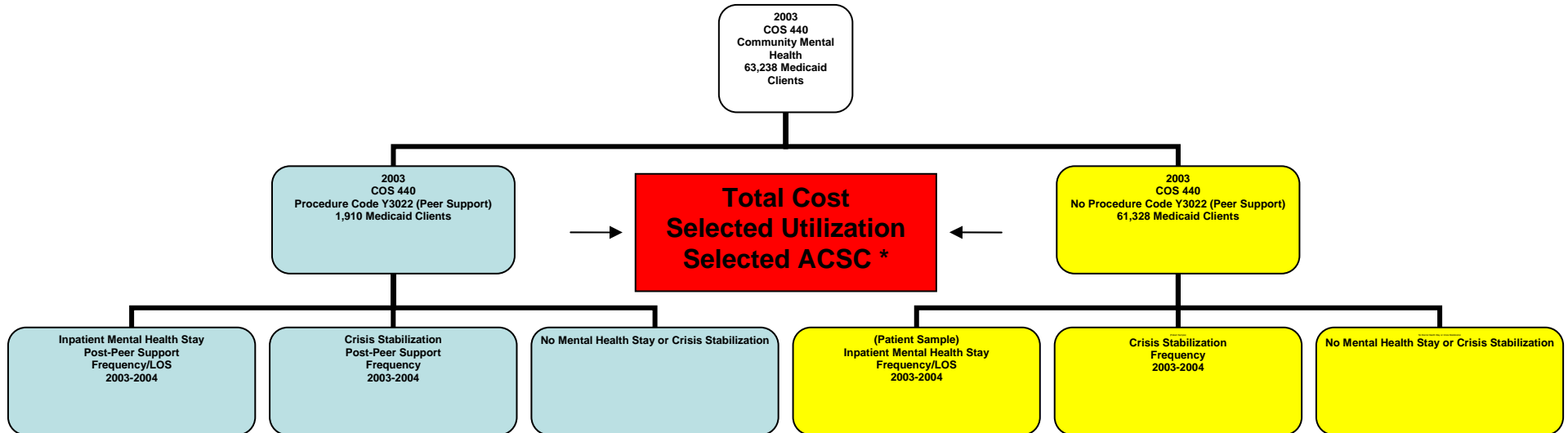
All acute care cost differences are statistically significant. Costs are higher for the study group over the 24-month period in total costs, professional claims, and prescription drug claims. State mental health hospital costs are higher for the control group.

IX. Recommendations

The research described above is considered a first step in understanding the effectiveness and future direction of Peer Support. Toward that future direction, additional studies might attempt to determine:

- Why some clients choose Peer Support and some do not.
- The extent of geographic barriers to the delivery of Peer Support services.
- The extent and impact of individuals dropping out of the program for three months or more and then rejoining the program.

Appendix Research Schema



- Database source: Georgia Medicaid Claims File 2003
- For the right-hand (yellow) boxes, a sample of individual clients will be selected. One of the first efforts of the study Advisory Group will to develop, with Project Staff, the characteristics of such a sample.
- For the left-hand (blue) boxes, all the identified (1,910) records will be used.

* ACSC = Ambulatory Care Sensitive Conditions

ⁱ This goal was subsequently eliminated at the request of the Commissioner of Human Resources.

^v FY 2007 Provider Manual Part I/Section I MH and AD Service Definitions and Guidelines

^{vi} *Olmstead v. L.C.*, 1999.

^{viii} The Study's database as described, was primarily developed from three Georgia healthcare program administrative databases. These resources were designed for administrative purposes such as billing, fiscal, and managerial oversight. The use of administrative data pre-defines and, consequently, can limit analytic options for non-administrative purposes such as research. All things that may affect care and its cost are obviously not available from a claims form. Consequently, administrative data have limitations, especially for the analyses of qualitative issues related to care and its outcomes. In certain instances, the administrative database may not support definitive answers, but rather only provide implications for further exploration through a set of more research-oriented data. Despite limits, these databases are economical (no collection costs) and currently accessible. They are cost-effective, especially for preliminary investigative studies such as this one. They represent a reasonable place to begin research, but not necessarily the place to end such efforts.

^{xii} At the time of Study design, these were the most recent available years of claims.

^{xiii} COS 440 is the Medicaid category of service that includes all community mental health claims.

xxii For both the study and control groups, 96.1 percent of the former and 96.5 percent of the latter have more than one diagnosis for inpatient acute admissions. Three and one-half percent of the control group's outpatient diagnoses are related to mental retardation, and 4.1 percent of the study group's associated diagnoses are related to mental retardation.

^{xxiii} As it was listed on the client's first Medicaid claim for CY 2003.

^{xxv} At least as measured by a service claim within DHR's records.

^{xxvii} Community inpatient beds are purchased by MHDDAD for inpatient mental health stays in areas where there are no state mental hospitals.

^{xxxi} The frequent use of Peer Support services by the study group is one reason for the difference between the two groups.