

**Characteristics of the Medicaid Population of Iowa Who Receive Mental Health Services:
A Managed Mental Health Care Pre-Implementation Survey (Adult Summary July, 1995)**

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Survey Results: Adult

The targeted goal was the receipt of 1000 responses from eight pre-designated strata. These strata consisted of a three way cross-classification between schizophrenia versus non-schizophrenia, urban versus rural county of residence, and psychiatric hospitalization in 1993 versus none (a rough measure of illness severity). A 25% response rate among the “high severity group” and a 40% response rate from the “low severity group” was anticipated. A total of 3400 adults were to be sampled in order to receive 1000 completed surveys. However, the actual study sample varied from the intended sample for two reasons: 1) for two cells (schizophrenia, high severity, rural and schizophrenia, high severity, urban), the designated number of subjects was not available and all available subjects in those cells were surveyed; and 2) an unintended imbalance in urban/rural sampling occurred because the original sample frame contained an error in urban/rural coding which mistakenly defined two urban counties as rural. With these modifications, the total number of expected responses was 780 out of a study sample size of 2535 persons. The sample distribution is described in Table 1.

Table 1. Population from which the sample was drawn and the number of responses received within each strata

Description of Sample Stratum	Population Size (% total population)	Number of Solicited Responses	Final Sample Size (% responses)
1. rural schizophrenia (hospitalized in 1993)	143 (0.8%)	143 (5.7%)	45 (5.5%)
2. urban schizophrenia (hospitalized in 1993)	192 (1.2%)	192 (7.6%)	54 (6.6%)
3. rural non-schizophrenia (hospitalized in 1993)	1296 (7.8%)	479 (19.0%)	148 (18.2%)
4. urban non-schizophrenia (hospitalized in 1993)	1056 (6.4%)	712 (28.3%)	206 (25.3%)
5. rural schizophrenia (not hospitalized in 1993)	708 (4.3%)	202 (8.0%)	89 (10.9%)
6. urban schizophrenia (not hospitalized in 1993)	497 (3.0%)	296 (11.7%)	112 (13.7%)
7. rural non-schizophrenia (not hospitalized in 1993)	8063 (48.6%)	212 (8.4%)	84 (10.3%)
8. urban non-schizophrenia (not hospitalized in 1993)	4624 (27.9%)	284 (11.3%)	77 (9.4%)
TOTAL	16579	2520*	815

*Fifteen subjects who were sent a survey were retrospectively determined to not meet criteria for study inclusion (i.e., did not fall into one of the specified sample strata) when recoded for rural versus urban residence.

STUDY RESULTS

Demographic Characteristics of Adult Survey Respondents

Diagnostic Classification

percent schizophrenia	36.8
percent schizoaffective disorder	3.7
percent bipolar affective disorder	6.5
percent major depressive disorder	25.0
percent anxiety disorder	3.8
percent panic disorder	7.6
percent adjustment disorder	16.6

Mean Age (years) 37.0

Percent Female 72.0

Percent Rural 44.8

Marital Status

percent never married	39.3
percent separated	6.1
percent spouse deceased	2.7
percent married	16.9
percent divorced	31.3
percent common law/living together	3.7

Educational Status

percent never attended school	0.6
percent eighth grade or less	7.1
percent some high school	16.8
percent high school or equivalent	36.6
percent some college/junior college	26.7
percent college graduate	5.6
percent some graduate school	2.5
percent graduate or professional school	4.1

Ethnicity

percent American Indian/Alaskan Native	3.2
percent Asian/Pacific Islander	1.2
percent Black, not Hispanic	5.5
percent Hispanic/Latino	1.5
White, not Hispanic	88.5

Health Status of Adult Respondents

Self-report of mental health status. Respondents were asked to assess their mental health status with the following question “In the past 6 months, how would you say that your mental health has been?” and asked to choose one of five answers ranging from “poor” to “excellent”. The results, summarized in Table 2 represent the population estimate for the self-report of mental health status in the study population.

Table 2. Self-report of mental health status over past 6 months

Response	Percent	95% Confidence Interval
poor	15.3	11.4-20.5
fair	38.1	32.6-44.5
good	26.4	21.6-32.4
very good	11.6	8.4-16.2
excellent	8.6	5.7-12.9

Self-report of physical health status. Similar to self assessment of mental health status, respondents were asked to rate their physical health status by their response to the question “In the past 6 months how would you say that your physical health has been?” Estimated population responses are summarized in Table 3.

Table 3. Self-report of physical health status over past 6 months

Response	Percent	95% Confidence Interval
poor	16.7	12.6-22.1
fair	32.4	27.2-38.7
good	30.6	25.4-36.7
very good	13.7	10.2-18.4
excellent	6.6	4.2-10.5

Satisfaction with Mental Health Services

Respondents were asked to rate their satisfaction with mental health services according to whether they agreed with the following statement: “I am satisfied with the mental health care I have received over the past 6 months”. Answers ranged from “strongly agree” to “strongly disagree”. Most respondents indicated some degree of satisfaction (67%) as shown in Table 4.

A summary score and its 95% confidence interval estimating satisfaction with mental health services in the study population was calculated and scaled to range from 0 (least satisfied) to 1 (most satisfied).

Table 4. Reported satisfaction with mental health services received in past 6 months

Response	Percent
strongly agree	26.6
mostly agree	31.1
slightly agree	9.5
neither agree nor disagree	13.7
slightly disagree	4.7
mostly disagree	4.3
strongly disagree	10.1
<i>Summary Score</i>	<i>0.68 (0.64-0.72)</i>

Satisfaction with Life

Respondents were asked to rate their satisfaction with their lives according to whether they agreed with the following statement: “How do you feel about your overall satisfaction with life during the past six months?” Results are shown in Table 5. About 60% are satisfied with their lives, to some degree. The summary score estimating the population response and its 95% confidence interval are also shown in Table 5.

Table 5. Reported satisfaction with life during past 6 months

Response	Percent
very satisfied	20.3
somewhat satisfied	23.7
slightly satisfied	15.8
neither satisfied nor dissatisfied	7.0
slightly dissatisfied	7.6
somewhat dissatisfied	11.2
very dissatisfied	14.4
<i>Summary Score</i>	<i>0.59 (0.54-0.63)</i>

Respondents were asked to compare their present satisfaction with life to their life satisfaction of two years ago in order to determine whether they believe that their quality of life is getting better or getting worse. Sixty-three percent of respondents were more satisfied with their lives now than they were two years ago.

Overall Life Satisfaction

In addition to being asked to rate their global life satisfaction with a single question (and how their present satisfaction compared to satisfaction of two years ago), respondents were asked to assess their present and past life satisfaction by responding to eight items which addressed various aspects of day to day life (i.e., housing, occupational status, physical health, mental health, interpersonal relationships, economic status, self-sufficiency, and leisure activity). The reported overall life satisfaction scores are shown in Table 6. By this measure, respondents indicated that they were slightly more satisfied with their lives now than they were two years ago (0.59 on a scale of zero to one with a score of 0.50 indicating no change).

ANALYSIS OF STATISTICAL FINDINGS

Effect of Diagnosis

Age. The mean age of the study population was 36.4 years with a 95% confidence interval of 35.1-37.8 years. Most of the variation in age between diagnostic groups was due to respondents with schizophrenia being older and respondents with adjustment disorder being younger than the population as a whole.

Gender. The distribution of gender in the sample population was 78.2% female (95% confidence interval: 72.7-82.5) and 21.8% male (95% confidence interval: 19.5-27.3). Only respondents with adjustment disorder demonstrate consistency with the population distribution. Most striking is the nearly equal distribution of gender among persons with schizophrenia. Schizoaffective disorder shows a similar trend. The categories of bipolar, depressive, anxiety, and panic disorders showed a preponderance of females. This is generally consistent with the epidemiology of these conditions and more pronounced in the sample population due to the overall preponderance of females.

Marital status. Marital status is one measure of ability to form and sustain interpersonal relationships. In the study population, 31.4% of persons were single (never married) with a 95% confidence interval of 26.4-37.3%. Persons with schizophrenia and schizoaffective disorder were more likely to report single marital status than the population as a whole. This is consistent with the relationship between these disorders and social impairment. The only diagnostic group less likely to be single than reported in the general population are persons with panic disorder (who are also more likely to be divorced). Persons with bipolar disorder, depression, and general anxiety disorder are also more likely to be divorced than the population as a whole which is 36.0% with 95% confidence interval of 30.6-42.4.

Education level by diagnosis. In the study population, 55.6% of persons are estimated to have a high school or equivalent education. Analysis of the data did not show significant differences in educational level by diagnostic stratification. The values for all groups appear to be consistent with those estimated for the study population as a whole.

Ethnicity. In the study population, 93% of persons were White, not of Hispanic origin (95% confidence interval of 90.4-95.6). Persons with schizophrenia, schizoaffective disorder, and general anxiety disorder were less likely to be White and of non-Hispanic descent than the study population as a whole.

Geographic location. Of persons who responded to the survey, 44.8% lived in a rural county. There did not appear to be a difference in rural versus urban county residence when categorized by diagnosis.

Effect of Rural versus Urban Residence

There were no significant differences in rural versus urban residence when examined by variables of age, gender, marital status, or level of education. Persons who live in a rural county do not report less education than persons in urban counties. Many studies which describe characteristics of rural populations (especially those receiving treatment in the public sector) assume that persons who live in rural areas have less education. It is important to note that this does not appear to be the case in Iowa. The distribution of ethnicity between rural and urban counties demonstrated a significant difference; non-White persons were more likely to report residence in an urban county.

Assessment of Functional Status

Functional status in the survey respondents and estimate of functional status in the study population was assessed by evaluating self-report of residential status, occupational status, and economic status. Self-reported satisfaction with each aspect of functional status was also addressed.

Residential status. Persons with schizophrenia and schizoaffective disorder are less likely to report that they are living independently. This is consistent with the increased likelihood of impaired function often associated with this diagnosis. Although persons with a diagnosis of schizophrenia report independent living status in 70.13% of cases, this may be an over estimate due to non-response bias (i.e., it is probable that persons who had a lower level of impairment due to their illness were more able to respond to the mail-out survey). Persons with a stable living situation are also more likely to have received the survey since they had a known mailing address.

Occupational status. In the study population, an estimated 43.2% of persons reported that they were working or in school at the present time (95% confidence interval of 37.6-49.8). Persons with schizophrenia and schizoaffective disorder were less likely to report going to work or school. While this finding is not unanticipated, persons with general anxiety disorder were also less likely to report work or school, indicating that this group may also have significant functional impairment in regard to occupational status.

Persons who work or go to school appear to be engaged in these activities on roughly a half time basis. Persons with diagnoses of anxiety disorder, panic disorder, and adjustment disorder work or go to school for more hours per week than persons in the other groups. In all diagnostic groups, of those who work or go to school, approximately 70% are paid (or receive financial support) for this activity. Persons with major depressive disorder and anxiety disorder appear to be paid less often than persons in the other groups. Although the reason for this cannot be determined from information contained in the present study, it is possible that persons in these groups are more likely to attend school, as opposed to work.

Persons who live in a rural county were more likely to report that they worked or attended school than were persons who live in an urban county. Of persons working or going to school, however, there were no apparent differences in the number of hours of work/school per week or whether or not they were paid for this activity.

Economic status. In the study population as a whole, the three most frequently reported sources of income were:

1. SSI: 40% of respondents (95% confidence interval: 34.7-46.2)
2. Social welfare benefits (e.g., AFDC): 37.5% of respondents (95% confidence interval: 31.9-44.0)
3. Earned income: 31.1% of respondents (95% confidence interval: 25.8-37.3)

The three most frequent income sources reported by subjects in each diagnostic category were also noted. Responses appeared to reflect the disability (presumably due to psychiatric illness) within each diagnostic group. Disability income (SSDI) was the second most common response in persons with schizophrenia and schizoaffective disorder. Persons with bipolar affective disorder also reported SSDI as a frequent income source. Somewhat more unexpectedly, persons with anxiety disorder and panic disorder reported SSDI as one of their three most common sources of income. Although the present study cannot determine the basis for which respondents receive SSDI, that this source is frequently reported by persons with anxiety disorders suggests that significant functional impairment may be present in this group. In comparison, earned income was the most frequently reported income source in the anxiety disorder group. This apparent discrepancy may be explained by heterogeneity within this diagnostic group (i.e., a wide range of functional status).

Satisfaction with Functional Status

For most diagnostic categories, the sample population reported the least satisfaction with economic status and the most satisfaction with residential status; reported satisfaction with occupational status was intermediate. This pattern was observed in all diagnostic groups except for persons with bipolar illness. Persons with bipolar disorder were least satisfied with occupational status, although the difference between reported satisfaction with residential status and occupational status was small.

Among all diagnostic groups, persons with schizophrenia reported the best satisfaction with economic status although measures of economic status demonstrated that this group had the highest frequency of SSDI as a source of income. Similarly, although persons with schizophrenia reported relatively high satisfaction with occupational status, they fared unfavorably in measures of occupational status (i.e., low proportion attending work/school, few hours in work/school, and low proportion being paid for work/school). Finally, although persons with schizophrenia reported a relatively good level of satisfaction with their residential status, as a group, they have the lowest frequency of independent living status. Self-report of satisfaction with residential, occupational, and economic status in persons with schizophrenia may, in part, be affected by prominent negative symptoms of their illness.

Persons with major depressive disorder reported the lowest satisfaction with occupational and economic status of all groups, and a relatively low satisfaction with residential status compared to other diagnostic groups. Dissatisfaction expressed by this group may, in part, be either a consequence or a cause of their illness.

Satisfaction with Mental Health Services

The results of the present study demonstrate high service satisfaction under the present fee-for-service system. Almost two thirds (63%) of the respondents indicated a high level of overall satisfaction with the mental health care they had received over the past 6 months. In contrast, only 13% indicated overall dissatisfaction with mental health services. Questions regarding specific aspects of satisfaction with services all yielded similar distributions of responses. For example, 65% indicated that the mental health care professionals they deal with seem to think their opinions about their treatment needs are important, as opposed to 9% who did not; 60% of respondents felt that they were given as much information as they needed, while 12% did not. Finally, 59% felt they had enough say about the services and medication they received, as opposed to 13% who did not.

Service satisfaction scale. The mean level of the service satisfaction scale reported by respondents was 0.72 on a scale of 0 (lowest satisfaction) to 1 (highest satisfaction). As illustrated in Figure A, the distribution of scores is heavily skewed toward levels of high satisfaction. Service satisfaction higher than a neutral value of 0.5 was reported by 81% of respondents. Furthermore, 51% had service satisfaction scales above 0.75.

Satisfaction with Life Quality

Almost half of the respondents (47%) indicated that they were either “very satisfied” or “somewhat satisfied” with their overall quality of life over the past 6 months, as opposed to 22% who indicated that they were either very dissatisfied or somewhat dissatisfied. Again, the distribution of responses to specific questions regarding quality of life (e.g., satisfaction with housing, work, physical health, relationships) tended to be quite similar.

Life satisfaction scale. Similar to the service satisfaction scale responses, the observed responses to the life satisfaction scale were also, on the average more positive than neutral. As illustrated in Figure B, the distribution of these scores is also skewed in a positive direction, although is more symmetric than that of the service satisfaction scores. A life satisfaction score greater than 0.5 was reported by 66% of the respondents.

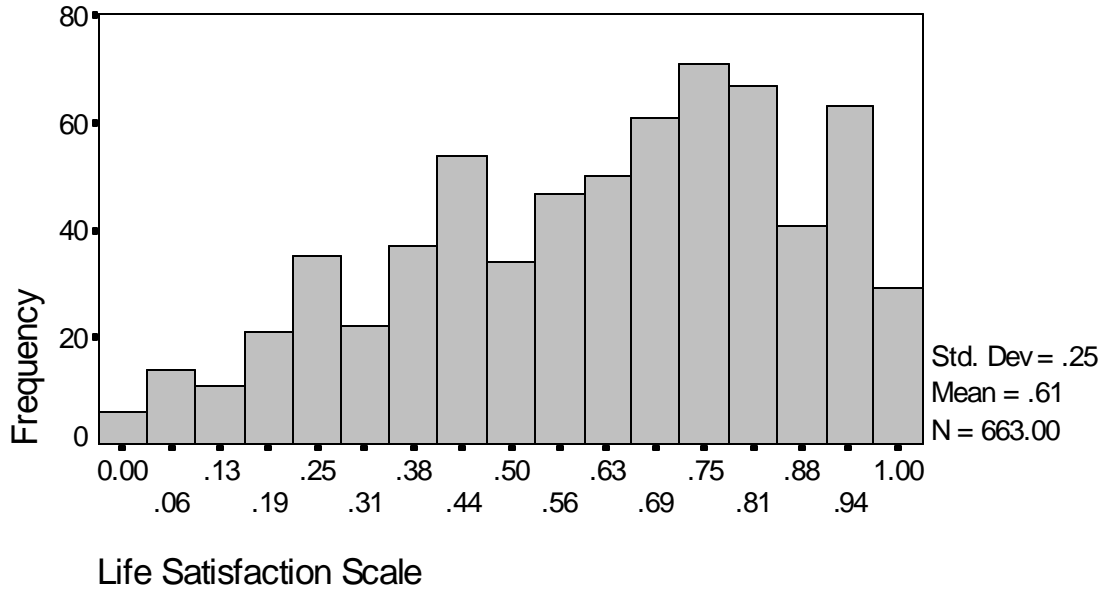
Figure A

Observed Distribution of Service Satisfaction Scales

Among Respondents

Observed Distribution of Life Satisfaction Scores

Among Respondents



Recommendations Based on the Analysis - Adult

1. The present study provides population estimates of selected characteristics of Medicaid mental health benefit recipients. The description of demographic variables, service satisfaction, and life quality in this population provides a baseline against which changes can be measured.

Resurvey of this population following an extended period of service delivery under managed mental health care (e.g., two years or longer) is recommended in order to estimate the impact of managed mental health care on these and other variables of interest.

2. The present study describes the development of scales for the measurement of satisfaction with services and assessment of life quality that are suitable for use in monitoring characteristics of the Medicaid population under managed mental health care delivery. The scales developed by the study investigators are relatively short and are intended to measure the specific interactions between patients, their service providers, and their quality of life. Preliminary statistical analysis of these scales indicate that they are valid measures of service satisfaction and satisfaction with life quality in the Medicaid population.

3. Self-report of service access and utilization in this and all studies should be interpreted with caution. Pilot data on the survey instrument pertaining to self-report of service need, availability, and use demonstrated low measures of reliability. Validity of self-report, in addition to a more comprehensive understanding of service use among survey respondents, should be measured by linking self-report of service utilization with data contained in Medicaid eligibility and claims files.

4. Self-report of satisfaction in persons who are significantly impaired by their illness cannot be taken as an estimate of functional status. For example, among all diagnostic groups, persons with schizophrenia reported the best satisfaction with economic status although measures of economic status demonstrated that this group had the highest frequency of SSDI as an income source. Similarly, although persons with schizophrenia reported a relatively high satisfaction with occupational status, they fared unfavorably in measures of occupational status (i.e., proportion attending work/school, number of hours in work/school, and proportion paid for work/school). Finally, although persons with schizophrenia reported a relatively good level of satisfaction with their residential status, as a group, they have the lowest frequency of reporting independent living status.

While self-report of satisfaction in persons who are significantly impaired by their illness is neither less important nor less valid than self-report in other subgroups, self-report of service satisfaction in these populations is not a valid estimate of functional status. Similarly, self-report of satisfaction with services, mental health status, or functional status cannot be used as the sole indicator of service quality in population subgroups with significant functional impairment due to their illness.