

**ADAMH BOARD OF FRANKLIN COUNTY
2010 SQI DEFINITIONS**

SYSTEM QUALITY INDICATORS: ACCESS TO CARE, APPROPRIATENESS OF CARE & OUTCOMES OF CARE

UNDUPLICATED CLIENT COUNTS; NEW CLIENT COUNTS – BY MONTH AND BY YEAR; READMITTED CLIENT COUNTS; DEMOGRAPHIC PROFILE; AND PRIORITY POPULATIONS

The Agency Service Plan and Budget are deliverables to the ADAMH Contract. Provider Stat offers a venue for providers and ADAMH to review and discuss data that reflect those deliverables. Provider Stat data include all uniquely identified clients successfully billed, including treatment shadow claiming.

Clients New To Provider by Month

Identifies the number of clients who received their first service at the provider in a particular month/year, by their eligibility for Medicaid (Line of Business/LOB as MCD or NON). Clients who were both MCD and NON in a given month are counted in the MCD column only. This provides a distinct or unduplicated new client count if one adds the MCD and NON rows together. (Tracking “first services” for the purpose of determining if a client is “new” is from July 1998 start of MACSIS forward.)

Client Demographics

Displays the provider’s client counts based on basic demographics (Medicaid Eligibility, Gender, Race, Ethnicity, Age Group) and broad Service Type (MH or AOD), using MACSIS member and claims data.

ACCESS 1	TOTAL CLIENTS SERVED BY PROVIDER AND SYSTEM (UNDUPLICATED BY PROVIDER AND SYSTEM)
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Concern:	This indicator focuses on the total unduplicated client count, and relative number of clients served by each provider to the total served by the system. This indicator must be evaluated in conjunction with the other Access Indicators, 2 through 4.
Rationale:	Represents one indication of the provider’s contribution to the system of care in providing treatment to those in need.
Numerator:	N/A
Denominator:	N/A
Algorithm/ Specifications:	Distinct count of clients. System totals represent clients served by ADAMH Contract providers.
Population(s):	All treatment populations
Dashboard Scoring:	Not scored

ACCESS 2	NEW CLIENTS TO THE PROVIDER AND SYSTEM (SINCE 1998)
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Concern:	Count of new clients to provider in the calendar year. Represents any client “never before served” since July 1998 (beginning of MACSIS), as compared to the unduplicated count of all new clients to the system.
Rationale:	Provides an indicator of client intake and access to treatment
Numerator:	New clients served
Denominator:	Total clients served (Access 1)
Algorithm/ Specifications:	The System totals are clients served by ADAMH Contract providers and represent a distinct count of people – not a sum of the “new to provider” clients
Population(s):	All treatment populations
Dashboard Scoring:	Not scored

ACCESS 3 READMITTED CLIENTS AFTER 120 DAYS OF NO SERVICE, PROVIDER AND SYSTEM

Concern:	Count of “readmitted” clients to the system and to the provider following 120 days of no treatment services. A gap in service of 120 days is the calculation ADAMH uses to measure the end of one episode care and start of another.
Rationale:	Provides an indicator of client return or a new episode, and access to treatment
Numerator:	Readmitted clients served
Denominator:	Total clients served
Algorithm/ Specifications:	<p>Provider data: A gap in service at that provider of 120 days or more. A distinct count of the individual clients who had at least one “readmission” during the calendar year.</p> <p>System data: A gap in service by ADAMH Contract providers (excluding Netcare) of 120 days or more. A distinct count of the individual clients who had at least one “readmission” during the calendar year.</p>
Population(s):	All treatment populations
Dashboard Scoring:	Not scored

ACCESS 4	AOD CRIMINAL JUSTICE, MH SMD AND MH SED PRIORITY POPULATIONS: CLIENT COUNT AND AVERAGE COST PER CLIENT
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Concern:	With limited behavioral health care resources available, ADAMH seeks to increase access for consumers at a reasonable cost for the priority populations of SMD Adults, SED youth, and Criminal Justice adults.
Rationale:	This indicator monitors system-wide and provider-specific changes in service delivery for the three high priority populations for which ADAMH evaluates client Outcomes and Customer Satisfaction. Client volume, allowed cost and average cost per client are compared across years.
Numerator:	Total cost of services by population
Denominator:	Number of clients by population
Algorithm/ Specifications:	Timeframe = Calendar Year and YTD based on Date of Service. System calculations comprised of all ADAMH Contract providers
Population(s):	High priority populations of SMD Adults, SED youth and families, AOD Adults involved in the Criminal Justice system
Dashboard Scoring:	Not scored

ACCESS 4	PEOPLE WITH AT LEAST ONE STATE BHO ADMISSION SINCE 2007: PRIORITY POPULATIONS CLIENT COUNT AND AVERAGE COST PER CLIENT
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Concern:	With limited behavioral health care resources available, ADAMH seeks to increase access and positive results for highest risk consumers who have experienced a psychiatric hospitalization at a state BHO, at a reasonable cost
Rationale:	This indicator monitors system-wide and provider-specific changes in service delivery for persons who have recent state hospitalizations. Client volume, allowed cost and average cost per client are compared across years.
Numerator:	Total cost of services by population
Denominator:	Number of clients by population
Algorithm/ Specifications:	Hospital Clients and Costs by Year:

System: The unduplicated count of clients who were admitted within that calendar year. Costs are those clients' BHO per diem charges in that year. Percent of Total Treated is this client count divided by the total distinct count of clients served by ADAMH Contract providers in that year (Access 1).

Provider: The unduplicated count of clients who were admitted within that calendar year, for whom the provider is the Lead Agency (PCP) listed in MACSIS for that BHO admission. The costs are those clients' BHO per diem charges in that year. Percent of Total Treated is this client count divided by the provider's total distinct count of clients served in that year (Access 1).

Outpatient Clients and Costs by Year: This represents the annual outpatient care invested in any person who has been admitted to a BHO since 2007. The yearly client count and costs are not limited to the BHO clients admitted during that year.

System: The unduplicated count of any client admitted to a BHO since 2007, who received outpatient services within the calendar year. The costs are all MACSIS claims during the year, for any client admitted to a BHO since 2007. Percent of Total Treated is this client count divided by the total distinct count of clients served by ADAMH Contract providers in that year (Access 1).

Provider: The unduplicated count of any clients admitted to a BHO since 2007, that the provider served during the calendar year, regardless of whether the provider is the Lead Agency (PCP). The costs are that provider's MACSIS claims during the year, for any client admitted since 2007. Percent of Total Treated is this client count divided by the provider's total distinct count of clients served during the year (Access 1).

Population(s): People with at Least One State BHO Admission since January 2007

Dashboard Scoring: Not scored

APPROPRIATENESS 1: ACTIVE PARTICIPATION IN DECISION CONCERNING TREATMENT

Concern: Clients are actively involved in their treatment plans and are treated with respect and dignity.

Rationale: Quality of Care Question being asked: do consumers play an active role in making decisions regarding their treatment? This is a measure of the degree to which our system embraces the recovery model.

Numerator: Number of people who consider themselves being treated with dignity and respect.

Denominator: All people with specified outcome scores in the system.

Algorithm/

Specifications:

For SMD and GAOA clients, please refer to Adult Consumer forms

- Item #15 in Consumer A & B forms asks: "I have been treated with dignity and respect at this agency." If the client answers 4 or 5, then this client is counted as being treated with adequate dignity and respect. If the client answers 1 or 2, then this client is counted as not being treated with adequate dignity and respect. If the client answers 3, then this client is counted as being treated with average/mediocre dignity and respect.
- In the specified year, count the number of people who answer 4 or 5 as the numerator and divide it by the denominator, which is the number of people who have #15 score available in Consumer A and B forms.

For SED & Children & Adolescents (C&A)clients, please refer to Parent Forms

- Item #2 in the Satisfaction section asks: "To what degree have you been included in the treatment planning process (for your child)?" If the client answers 1, 2 or 3, then this client is counted as having a positive view of being involved in his/her (child's) treatment. If the client answers 4, 5 or 6, then this client is counted as having a negative view of being involved in his/her (child's) treatment.
- In the specified year, count the number of people who answer 1, 2 or 3 as the numerator and divide it by the denominator, which is the number of people who have #2 score available in Youth and Parent forms.

Population(s): SMD, GAOA, SED and *Children & Adolescents (C&A)*.

Dashboard Scoring:

Min Range	Max Range	Index Score
0	0.6959	1
0.696	0.7829	2
0.783	0.8699	3
0.87	0.9569	4
0.957	1	5

APPROPRIATENESS 2: PERCENTAGE OF PEOPLE WHO HAVE LESS THAN 3 CRISIS EPISODES AT NETCARE

Concern/Rationale: Crisis episode volume is one indicator of client level of risk. Lead Agencies for persons with SMI are charged with crisis prevention responsibilities for persons linked to them.

Numerator: SMD Adults who have 1, 2 or no crisis episodes at Netcare during the year

Denominator: SMD Adults who are linked to a Lead Provider.

Algorithm/

Specifications: Crisis episodes are created from Netcare claims information by using AOD and MH crisis codes (H0007 and S9484) and grouping by UCI the start date and the end date of continuous crisis services rendered by Netcare.

A provider is considered responsible for the care of a consumer if it meets the following lead agency criteria:

1. Primary SMD providers are included
2. Netcare, CHN, and COVA are eliminated
3. The responsible SMD provider is identified by the following:
 - a. Service from 1 provider – that provider is the lead
 - b. Services from multiple SMD providers – identify the provider who gave the greatest number of services.
4. Grouped by patient, year
5. Include clients who have never had a crisis episode

Population(s): SMD adults

Dashboard Scoring:

Min Range	Max Range	Index Score
0	0.7199	1
0.72	0.8099	2
0.81	0.8999	3
0.9	0.9899	4
0.99	9999.9999	5

**APPROPRIATENESS 3: PERCENTAGE OF PEOPLE DISCHARGED FROM STATE BHO WHO RECEIVE PSYCHIATRIC SERVICES WITHIN 14 DAYS.
PERCENTAGE OF PEOPLE DISCHARGED FROM STATE BHO WHO RECEIVE AN OUTPATIENT SERVICE WITHIN 7 DAYS.**

Concern: Effective and timely engagement by the client’s assigned lead provider, with attention to level of care and other service needs at discharge.

Rationale: Quality of Care Question Being Asked: Are consumers who are coming out of inpatient treatment being rapidly linked to outpatient care? Early outpatient follow up is a crucial component of continuity of care to help consumers avoid re-hospitalization. Lack of follow through with a discharge plan can lessen or negate the progress made in the inpatient program. Particularly for new clients, a delay in the linkage timeframe can lessen the likelihood of a successful community linkage.

Numerator: Number of discharges from a BHO followed by at least one outpatient care within 7 days at the assigned lead agency, divided by total discharges.

Number of discharges from a BHO followed by at least one psychiatric service within 14 days at the assigned lead agency, divided by total discharges.

Denominator: Total number of discharges from a BHO.

**Algorithm/
Specifications:** The assigned lead agency is captured in the PCP field of the client’s MACSIS member record during the BHO hospital episode.

This indicator is calculated from the monthly bed day file. Use the discharge date (disc_dt) and calculate the lag from this date to the next face to face service (modifier not equal to GT) for this client. The numerator will be the number of discharges where the outpatient linkage time is 7 days or less, and the psychiatric service (90862, H0016, 90801) linkage is 14 days or less. The denominator is the total number of discharges. Group by the discharge year from the discharge date (disc_dt).

Population(s): SMD adults

Dashboard Scoring:

Min Range	Max Range	Index Score
0	0.6799	1
0.68	0.7649	2
0.765	0.8499	3
0.85	0.9349	4
0.935	1	5

APPROPRIATENESS 4: PERCENTAGE OF PEOPLE WITH MULTI-DAY HOLDOVERS AT NETCARE WHO RECEIVE AN OUTPATIENT SERVICE WITHIN 7 DAYS

Concern: Effective and timely engagement of community treatment providers, with attention to level of care and other service needs at discharge from hospital diversion services. This measures **clients who are currently being served by a provider**.

Rationale: Quality of care question being asked: Do consumers who need hospital diversion services receive timely follow up by their usual outpatient provider? Prompt follow up care is an important part of the stabilization process following a mental health emergency and reflects close coordination between emergency service and ongoing outpatient care providers.

Numerator: Total number of multi-day holdover episodes at Netcare Corporation followed by at least one face to face outpatient care service within 7 days.

Denominator: Total number of multi-day holdover episodes at Netcare Corporation.

Algorithm/ Specifications: Multi-day holdover episodes are created from Netcare services information by using three consecutive M2281 claims, the holdover per deim at Netcare. The claims are grouped by UCI, the start date, and the end date of continuous holdover services rendered by Netcare.

For each episode, the provider responsible for the linkage is provider rendering the last service before the holdover episode and the first service after the episode is identified. A provider is considered responsible for the care of a consumer if both of the following are true:

1. A provider rendered the last service within 30 days of the start of the episode.
2. The same provider rendered the first service within 30 days of the end of the episode.

Population(s): All treatment populations

Dashboard Scoring:

Min Range	Max Range	Index Score
0	0.4799	1
0.48	0.5399	2
0.54	0.5999	3
0.6	0.6599	4
0.66	1	5

OUTCOMES 1: PERCENTAGE OF STATE BHO DISCHARGES THAT REMAIN IN THE COMMUNITY OVER 30 DAYS

Concern: Hospital readmission in less than 30 days can indicate failure of the hospital and community mental health system to adequately plan for inpatient and outpatient level of care, course of care, plan for support services, assess and develop a plan to mitigate risk factors and overall effective treatment continuity.

Rationale: A decrease in readmission rates is an indicator of effective treatment continuity, case and level of care planning, and can result in decreased risk to the consumer and community, increased psychosocial functioning and decreased symptom relapse.

Numerator: Number of individuals discharged with a community LOS of > 30 days.

Denominator: Total number of discharges.

Algorithm/

Specifications: The assigned lead agency is captured in the PCP field of the client's MACSIS member record during the BHO hospital episode

This calculation is derived from the ABD_MI50_USER.vABD_CLAIM_SERVICE view. Select hospitalization records (cbill_type = 'U'). Calculate the time lag between hospitalizations. The numerator is the number of discharges where the lag is over 30 days. The denominator is the total number of discharges. Group by the discharge year.

Population(s): SMD adults

Dashboard Scoring:

Min Range	Max Range	Index Score
0	0.7199	1
0.72	0.8099	2
0.81	0.8999	3
0.9	0.9899	4
0.99	1	5

OUTCOMES 2A: ADULTS: PERCENTAGE OF CONSUMERS WHO EXPERIENCE DECREASED PSYCHOLOGICAL DISTRESS

Concern: Adult clients are experiencing decreased psychological distress after treatment compared to prior to treatment.

Rationale: For adult clients, one of the indicators of treatment success is reduction of symptom distress over time. Studies show that decreased psychological distress over time facilitates recovery.

Numerator: Number of people who experience the reduction of symptom distress.

Denominator: All people with specified outcome score changes in the system.

Algorithm/

Specifications:

For SMD and GAOA clients, please refer to Adult Consumer forms

- Calculate the very last follow-up score of Overall Symptom Distress Subscale (SDS) received in the specified year by summing Part 3 (Q17-Q31).
- Calculate the intake score of SDS for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the change of SDS scores over time.
- The numerator is counted as the number of people who have experienced negative changes, i.e., the reductions of symptom distress (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with the SDS subscale score changes over time available in Consumer A and B forms.

For Adult AOD clients, please refer to ASI forms

- Calculate the 30-day or 90-day follow-up score of Psychological Distress Subscale received in the specified year by using the following formula:

$$\text{psy} = ((p4a + p5a + p6a + p7a + p8a + p9a + p10a + p11a) / 11) \\ + (p12 / 330) + (p13/44) + (p14/44)$$

“psy” is the calculated Psychological Distress Subscale. The other symbols such as p4a, p5a and etc. correspond to the specific scores in the ASI form.

- Calculate the intake score of Psychological Distress Subscale for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the changes of Psychological Distress Subscale score over time.
- The numerator is counted as the number of people who have experienced negative changes, i.e., the reductions of Psychological Distress (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with Psychological Distress Subscale score changes over time available in ASI forms.

Population(s): SMD, GAOA and Adult AOD.

Dashboard Scoring:

Population	Min Range	Max Range	Index Score
AOD Adult	0	0.5199	1
AOD Adult	0.52	0.5849	2
AOD Adult	0.585	0.6499	3
AOD Adult	0.65	0.7149	4
AOD Adult	0.715	1	5
GAOA	0	0.5199	1
GAOA	0.52	0.5849	2
GAOA	0.585	0.6499	3
GAOA	0.65	0.7149	4
GAOA	0.715	1	5
SMD	0	0.4799	1
SMD	0.48	0.5399	2
SMD	0.54	0.5999	3
SMD	0.6	0.6599	4
SMD	0.66	1	5

OUTCOMES 2K: YOUTH: DECREASED LEVEL OF SYMPTOMS / PROBLEMS

Concern: Youth clients are experiencing decreased level of symptoms or problems after treatment compared to prior to treatment.

Rationale: For youth clients, one of the indicators of treatment success is the level of symptoms or problems reduction over time. Studies show that decreased level of symptoms over time is a stable indicator of recovery. All the forms, Youth, Parent and Worker forms are referenced to assure that the concerns from all perspectives are well addressed.

Numerator: Number of people who experience the reduction of level of symptom.

Denominator: All people with specified outcome score changes in the system.

Algorithm/

Specifications:

The outcomes forms referred are Parent forms

- Calculate the very last six-month, annual or discharge follow-up score of Problem Severity (PSEVER) received in the specified year by summing the first twenty items (Q1-Q20) in Problem Severity Section.
- Calculate the intake score of PSEVER for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the change of PSEVER scores over time.
- The numerator is counted as the number of people who have experienced negative changes, i.e., the reductions of symptom distress (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with the PSEVER subscale score changes over time available in Youth, Parent and Worker forms.

Population(s): SED and *Children & Adolescents (C&A)*.

Dashboard Score:

Min Range	Max Range	Index Score
0	0.5199	1
0.52	0.5849	2
0.585	0.6499	3
0.65	0.7149	4
0.715	1	5

OUTCOMES 3A: ADULTS: IMPAIRMENT FROM SUBSTANCE USE

Concern:	Adult clients are experiencing fewer problems related to substance use after treatment compared to prior to treatment.
Rationale:	For adult clients, reduction of problems related to substance use is one of the indicators of increased functioning. The increased functioning over time is important to recovery.
Numerator:	Number of people who experience the reduction of problems related to substance use.
Denominator:	All people with specified outcome scores in the system.

**Algorithm/
Specifications:**

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For Adult AOD clients, please refer to ASI forms (Alcohol Usage Impairment)

- Calculate the 30-day or 90-day follow-up score of Alcohol Usage Subscale received in the specified year by using the following formula:

$$\text{alc} = (\text{d1a}/180) + (\text{d2a}/180) + (\text{d26}/180) + (\text{d28}/24) + (\text{d30}/24) \\ + (\text{logalc}/43.8)$$

where logalc = 0 if d23 = 0 and logalc = log(d23) if d23 > 0

“alc” is the calculated Alcohol Usage Subscale. The other symbols such as d1a, d2a and etc. correspond to the specific scores from the ASI form.

- Calculate the intake score of Alcohol Usage Subscale for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the change of Alcohol Usage Subscale scores over time.
- The numerator is counted as the number of people who have experienced negative changes, i.e., the reductions of impairment from Alcohol Usage (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with Alcohol Usage Subscale score changes over time available in ASI forms.

For Adult AOD clients, please refer to ASI forms (Drug Usage Impairment)

- Calculate the 30-day or 90-day follow-up score of Drug Usage Subscale received in the specified year by using the following formula:

$$\text{drg} = (\text{d3a}/390) + (\text{d4a}/390) + (\text{d5a}/390) + (\text{d6a}/390) + \\ (\text{d7a}/390) + (\text{d8a}/390) + (\text{d9a}/390) + (\text{d10a}/390) + (\text{d11a}/390) + (\text{d13a}/390) + (\text{d27}/390) + (\text{d29}/52) + (\text{d31}/52)$$

- “drg” is the calculated Drug Usage Subscale. The other symbols such as d3a, d4a and etc. correspond to the specific scores from the ASI form.
- Calculate the intake score of Drug Usage Subscale for the same clients (match pairs).
 - Subtract the intake score from the last follow-up score to obtain the change of Drug Usage Subscale scores over time.
 - The numerator is counted as the number of people who have experienced negative changes, i.e., the reductions of impairment from Drug Usage (improvement).
 - The percentage is obtained by dividing the numerator by the denominator, which is the number of people with Drug Usage Subscale score changes over time available in ASI forms.

Population(s): Adult AOD.

Dashboard Scores:

Population	Min Range	Max Range	Index Score
AOD Adult	0	0.5999	1
AOD Adult	0.6	0.6749	2
AOD Adult	0.675	0.7499	3
AOD Adult	0.75	0.8249	4
AOD Adult	0.825	1	5

OUTCOMES 3K: YOUTH: IMPAIRMENT FROM SUBSTANCE USE

Concern: Youth clients are experiencing fewer problems related to substance use after treatment compared to prior to treatment.

Rationale: For youth clients, reduction of problems related to substance use is one of the indicators of increased functioning. The increased functioning over time is important to recovery. All the forms, Youth, Parent and Worker forms are referenced to assure that the concerns from all perspectives are well addressed.

Numerator: Number of people who experience the reduction problems related to substance use.

Denominator: All people with specified outcome score changes in the system.

Algorithm/

Specifications:

The outcomes forms referred are Parent forms

- Item #7 in Parent form asks the parent to mark down the severity of the alcohol or drug problems for the youth.
- Record the very last six-month, annual or discharge follow-up score of item #7 received in the specified year.
- Record the intake score of item #7 for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the change of item #7 scores over time.
- The numerator is counted as the number of people who have experienced negative changes, i.e., the reductions of problems related to substance usage (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with the item #7 score changes over time available in the Youth, Parent and Worker form.

Population(s): SED and *Children & Adolescents (C&A)*.

Dashboard Scoring:

Min Range	Max Range	Index Score
0	0.7199	1
0.72	0.8099	2
0.81	0.8999	3
0.9	0.9899	4
0.99	1	5

OUTCOMES 4: PERCENTAGE OF CONSUMERS WHO EXPERIENCE AN INCREASED LEVEL OF FUNCTIONING OR QUALITY OF LIFE

Concern: All clients are experiencing an increase in everyday functioning, better quality of life and consequently recovery.

Rationale: In keeping with the recovery approach, the recent trend is to view clients outcomes result in terms of level of functioning. It is a measure of improvement in the person's ability to respond to everyday life situations, problems, and crises.

Numerator: Number of people who experience an increased level of functioning

- For SMD & GAOA clients, Quality of Life Subscale (QOL) is taken as the proxy of level of functioning.
- For AOD clients, Employment Condition and Family Relationship are taken as the proxy of level of functioning.
- For SED and *Children & Adolescents (C&A)* Clients, Functioning Subscale is used to indicate the level of functioning.

Denominator: All people with specified outcome score changes in the system.

**Algorithm/
Specifications:**

For SMD & GAOA clients, please refer to Adult Consumer forms

- Calculate the very last follow-up score of Quality of Life Subscale (QOL) received in the specified year by averaging Part 1 (Q1-Q12).
- Calculate the intake score of QOL for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the change of QOL scores over time.
- The numerator is counted as the number of people who have experienced positive changes, i.e., the increase of QOL (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with the QOL subscale score changes over time available in the Adult Consumer outcomes.

For Adult AOD clients, please refer to ASI forms

- Calculate the 30-day or 90-day follow-up score of Employment/Support Status (emp) and Family/Social Relationship(fam) received in the specified year by using the following formula:

$$\text{emp} = 1 - ((e4 / 4) + (e5 / 4) + (e11 / 120) + (\text{logemp} / 36))$$

$$\text{where logemp} = 0 \text{ if } e12 = 0 \text{ and } \text{logemp} = \log(e12) \text{ if } e12 > 0$$

$$\text{fam} = (\text{rvsms}/10) + (f30/150) + (f32/20) + (f34/20) + (\text{ratio}/5)$$

$$\text{where rvsms} = \text{the reverse value of } f3 \text{ (if } f3=2 \text{ then rvsms}=0; \text{ if } f3=0 \text{ then rvsms}=2)$$

$$\text{ratio} = \text{average value of } f18\text{-}f26$$

“emp” is the calculated Employment Status. The other symbols such as e4, e5 and etc. correspond to the specific scores from the ASI form. “fam” is the calculated Family Relationship. The other symbols such as f3, f30 and etc. correspond to the specific scores from the ASI form. rvsms and ratio are two calculated variables used in the formula.

- Calculate the intake score of Employment Status and Family Relationship for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the changes of both scores over time.
- The numerator is counted as the number of people who have experienced at least one negative change, i.e., either Employment Status or Family Relationship has less problems occurred (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with at least one of the two score changes over time available in ASI forms.

For SED and Children & Adolescents (C&A)clients, please refer to Parent Forms

- Calculate the very last six-month, annual or discharge follow-up score of Functioning Subscale received in the specified year by summing the last twenty items (Q1-Q20) in Functioning Section.
- Record the intake score of Functioning Subscale score for the same clients (match pairs).
- Subtract the intake score from the last follow-up score to obtain the change of Functioning Subscale scores over time.
- The numerator is counted as the number of people who have experienced positive changes, i.e., the increase in functioning (improvement).
- The percentage is obtained by dividing the numerator by the denominator, which is the number of people with the Functioning Subscale score changes over time available in the Parent form.

Population(s): ALL Populations.

Population(s): ALL Populations.

Dashboard Scoring:

Population	Min Range	Max Range	Index Score
AOD Adult	0	0.5999	1
AOD Adult	0.6	0.6749	2
AOD Adult	0.675	0.7499	3
AOD Adult	0.75	0.8249	4
AOD Adult	0.825	1	5
SED	0	0.5199	1
SED	0.52	0.5849	2
SED	0.585	0.6499	3
SED	0.65	0.7149	4
SED	0.715	1	5
C & A	0	0.5199	1
C & A	0.52	0.5849	2
C & A	0.585	0.6499	3
C & A	0.65	0.7149	4
C & A	0.715	1	5
GAOA	0	0.5199	1
GAOA	0.52	0.5849	2
GAOA	0.585	0.6499	3
GAOA	0.65	0.7149	4
GAOA	0.715	1	5
SMD	0	0.4799	1
SMD	0.48	0.5399	2
SMD	0.54	0.5999	3
SMD	0.6	0.6599	4
SMD	0.66	1	5