

Listening to the patient

Using consumer self report data to create
accountable behavioral health care systems

Prepared for the Joint Legislative Audit Committee
of the Washington State Legislature
February 9, 2001

Abstract

This presentation focuses on the use of consumer self report measures of outcome in the delivery of behavioral healthcare services. The material is based on the experience of large managed care companies that have integrated routine use of consumer completed outcome questionnaires into the delivery and management of mental health services across multi state systems of care. The data repository utilized in the preparation of this report includes over 50,000 individuals (adults and children) that received mental health services from private practitioners and publicly funded mental health clinics. The slides include information of statistical methods used for case mix adjustment and examples of clinical reports intended for use by the treating professional, clinic administrator, or senior system administrators with responsibility for entire treatment populations. Particular attention is given to proven methods for identifying high risk cases, including substance abusers, suicidal individuals, and consumers at high risk for premature termination of treatment. The presentation concludes with evidence that systems of care that foster accountability for clinical results utilizing this consumer centered model can achieve superior clinical outcomes and a more efficient use of limited treatment resources.

Consumer centered

- Provide mechanisms for frequent consumer feedback
- Use standardized consumer self report questionnaires to assess severity of symptoms and satisfaction with services
- Measure impact of services by repeated administration of questionnaire throughout the course of treatment

Accountability

- Measure effectiveness and efficiency of the system
- Consumer self report of improvement in symptoms is “gold standard” by which system is judged
- Provide frequent performance feedback
- Assure fairness (statistical adjustment for differences in case mix)

Sample Items*

PacifiCare Behavioral Health project



Directions: Read each item carefully and mark the box under the category which best describes your situation *during the past week*.

	Never	Rarely	Sometimes	Frequently	Almost Always
1. I have trouble falling asleep or staying asleep.....	0	1	2	3	4
2. I feel no interest in things.	0	1	2	3	4
3. I feel stressed at work, school or other daily activities...	0	1	2	3	4
4. I blame myself for things.	0	1	2	3	4
5. I am satisfied with my life.....	4	3	2	1	0
6. I feel irritated.	0	1	2	3	4
7. I have thoughts of ending my life.....	0	1	2	3	4

* Items from the Life Status Questionnaire™ (LSQ), a thirty item consumer self report questionnaire covering psychiatric symptoms, quality of interpersonal relationships and role functioning at work, school, etc.

Effectiveness and Value

- Effectiveness of the services is measured by the amount of improvement seen in the patients.
- Value of the services is a function of both effectiveness and cost.
- *Value=Improvement/Cost*
- An outcomes management program is judged by the improvement in both *effectiveness* and *value* of the treatment services for the entire system of care.

Measurement vs. Management

Outcomes management seeks to improve the *effectiveness* and *value* of the treatment services. Outcomes measurement is a means to this end. Outcomes measurement is concerned with improvement of the individual patient, outcomes management with the improvement in outcomes across an entire system of care.

Shaping Outcome Performance

- Routine collection of outcome data
- Evaluation of results; continuous performance feedback
- Real time decision support tools
- Real consequences (financial incentives, retention of business)

Immediate clinical utility

- Identifying at risk cases
 - patient self report often reveals information not documented by clinician
 - suicidal ideation
 - substance abuse
- Monitoring trajectory of change
 - identify patients at risk premature termination
 - requires large normative sample with change scores

Risk items

LSQ items identifying cases at risk for suicide or substance abuse.

	Never	Rarely	Sometimes	Frequently	Almost Always
Suicide					
7. I have thoughts of ending my life.....	0	1	2	3	4
17. I feel hopeless about the future.....	0	1	2	3	4
Substance Abuse					
11. I use alcohol or a drug to get going in the morning.....	0	1	2	3	4
20. People criticize my drinking (or drug use). (If not applicable, mark "never".)	0	1	2	3	4
24. I have trouble at work/school or other daily activities because of drinking or drug use. (If not applicable, mark "never".)	0	1	2	3	4

Substance abuse identification

- Sixteen percent (16%) of an outpatient sample of commercially insured patients reported problems related to drug and or alcohol use on the LSQ (717 of 4573 cases).
- Criteria: Response of “sometimes” (2) or more on any of the three substance abuse risk items. Item inquires of frequency of problem *during the past week!*
- Of these, only **24%** were identified by the clinician as having a substance abuse problem!

Suicide risk identification

- Five percent (5%) of an outpatient sample of commercially insured patients reported thoughts of suicide “frequently” or “almost always” during the past week (242 of 4573 cases).
- As a group, these cases show highly elevated levels of symptoms and reports frequent feelings of hopelessness.
- Of these, *less than 40%* were identified by clinician as posing moderate or severe risk of harm to self.

Case Mix Adjustment

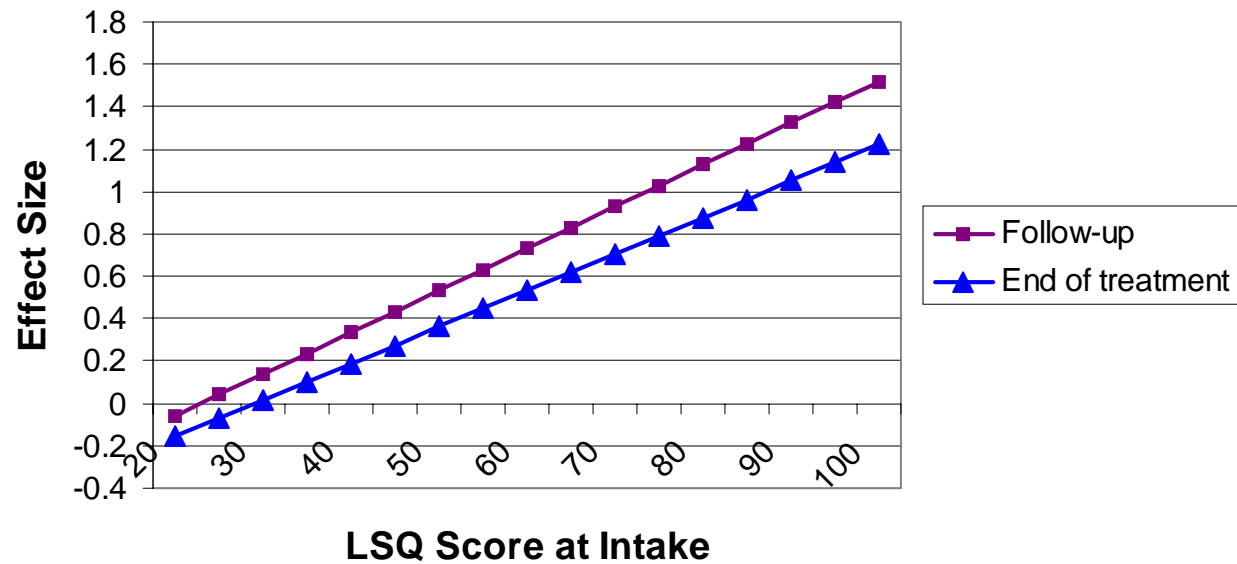
- Change score is dependent variable.
- Large normative sample permits analyses of patterns of change.
- Develop model to predict change score for each patient using data collected at intake.

Predicting Change

- Intake score is best predictor of change score
- Use regression formulas to predict change
- Develop formulas for different diagnostic groups, population, etc.
- Plotting regression lines conveys graphic information on outcomes across range of severity.

Plotting Outcomes

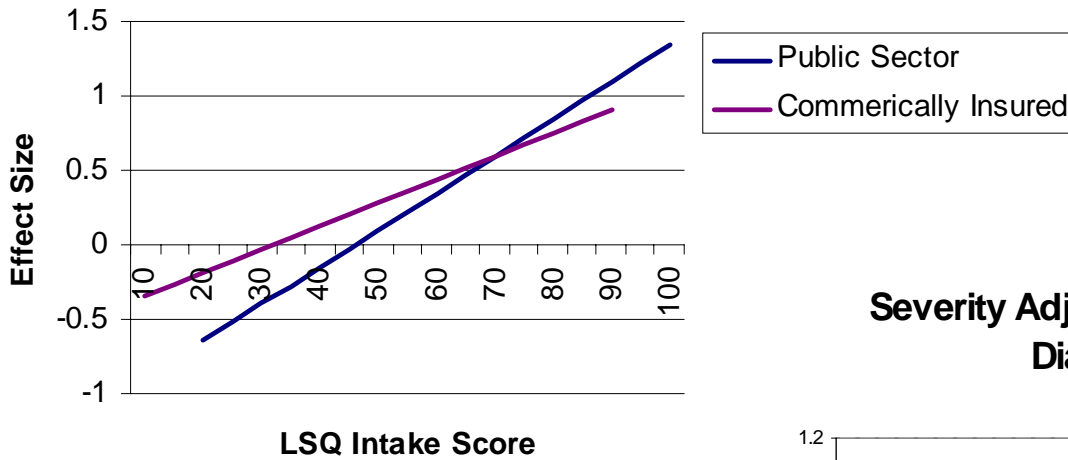
Effect Size: End of Treatment (n=1338)
and Follow-up (n=274)



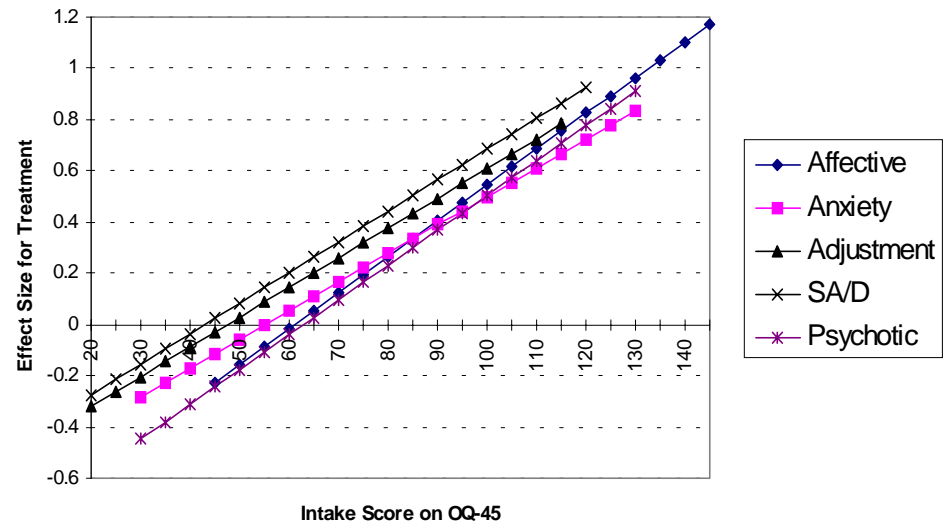
PacifiCare Behavioral Health project

Regressions for subgroups

Commerically Insured versus Public Sector



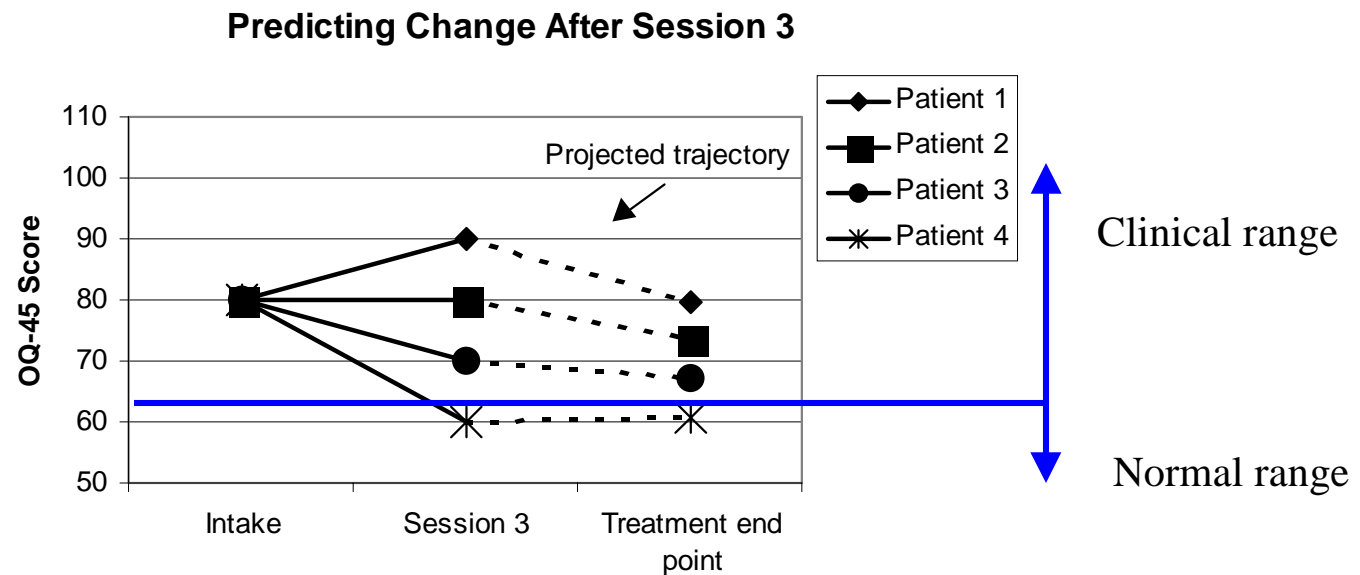
Severity Adjustment Regression Lines for Diagnostic Subgroups



PacifiCare Behavioral Health project

Predicting Trajectory Change

- Change in early sessions highly predictive of outcome
- This can be used to target at risk cases



Reporting Outcomes

- Compare actual change to predicted change.
- Create “Outcome Index” by subtracting predicted change from actual change.
- Breakout results by age and severity range.
- Use effect size so that results using different instruments can be pooled.
- Provide a single “Outcome Index” score combining results for all cases.

Targeted reports

- **Treating clinician**

Needs immediate feedback of clinical information on individual cases
- **Clinic administrator**

Regular summary reports showing overall results for clinic and drawing attention to specific high risk cases
- **System administrator**

Reports providing comparisons of outcomes across multiple sites within the system.

Sample high risk case report

(provided immediately to treating professional)

Patient Name:

DOB: 8/8/47

Most recent session #: 1 Session date: 11/17/00

Provider Data

Date of most recent clinician assessment: 12/16/00

Diagnoses: 296.89

Life time hospitalizations: 2

Most recent hospitalization:

Provider assessment of CD problem: *No*

Provider assessment of risk of harm to self: *Mild*

Test results

Questionnaire: LSQ

Intake score: 86

Target score: 68

Most recent score: 86

Severity Range: Severe

Change score:

Change Index:

Critical items

I have thoughts of ending my life: *Always*

I feel hopeless about the future: *Always*

I use alcohol or a drug to get going in the morning: *Always*

People criticize my drinking (or drug use): *Never*

I have trouble at work/school or other daily activities because of drinking or drug use: *Never*

Clinical Notes

The patient reports a high frequency of suicidal ideation while provider assessed *no* or *mild* risk. The patient reports possible substance abuse problem while provider assessment indicates no substance abuse problem. Treatment history indicates risk for hospitalization.

Substance Abuse Report

(Provided weekly to clinic administrators)

Team: PCCO

Date of report: 5/18/99

Last Name	Session Date	Session number	Primary		Provider Rated CD Problem?	OQ11	OQ26	OQ32	CD Scale	OQ-45 Score
			Diag.	Diag. Group						
"Bob"	3/9/99	3	296.33	Depression	No	4	4		8	132
	2/17/99	1		Other		3	1	2	6	95
	3/29/99	1	311	Other	No	2	4	0	6	113
	2/24/99	1		Other		1	4	0	5	111
	5/14/99	3		Other		3	2	0	5	94
	3/17/99	3	296.33	Depression	Yes	2	3	0	5	99
	5/14/99	1		Other		1	4	0	5	104

PacifiCare Behavioral Health project

Suicide Risk Report

(Provided weekly to clinic administrators)

Team ID: PCCO

Date of report:

05/18/99

Patient Name	Session Date	OQ-45 Score	I have thoughts of ending my life	I feel hopeless about the future	Provider assessment of risk	Date of Provider Assessment
"Bob"	5/14/99	104	Always	Always	.	
	3/9/99	132	Frequently	Always	None	3/16/99
	3/19/99	127	Frequently	Rarely	Moderate	3/30/99
	3/9/99	121	Frequently	Frequently	None	4/5/99
	5/13/99	108	Frequently	Frequently	.	
	3/3/99	88	Frequently	Frequently	None	3/20/99
	3/17/99	81	Frequently	Sometimes	None	3/14/99

PacifiCare Behavioral Health project

Change Index Report

(Provided weekly to clinic administrators)

Provider ID:

Date of Report: 5/2/2000

Bold italics indicates case has >75% probability of below average outcome.

Name	Intake Date	Baseline LSQ Score	Expected Final Score	Most Recent Session Date	Most Recent Session Number	Most Recent Score	Projected Final Score <i>(assumes continued treatment)</i>	Projected Change index
	8/17/1999	8	18	3/20/2000	4	50	37	<i>-20</i>
	2/15/2000	87	69	3/27/2000	3	101	82	<i>-14</i>
	3/17/2000	35	35	4/11/2000	3	52	45	<i>-10</i>
	6/23/1999	79	64	3/31/2000	3	84	71	-7
	4/3/2000	78	63	4/4/2000	3	81	69	-6
	9/22/1999	80	64	3/27/2000	2	81	69	-5
	3/7/2000	83	66	4/5/2000	3	81	69	-3
	3/9/2000	64	54	3/28/2000	2	63	56	-2
	8/10/1999	80	64	3/22/2000	5	76	66	-1
	3/21/2000	81	66	4/4/2000	3	77	67	-1
	2/22/2000	70	58	4/10/2000	3	63	57	1
	3/14/2000	35	35	4/4/2000	3	32	33	2
	2/22/2000	82	66	3/21/2000	3	70	63	3
	9/27/1999	64	54	4/11/2000	5	52	50	4
	2/11/2000	21	29	4/7/2000	5	18	24	5
	1/25/2000	68	56	3/28/2000	3	53	50	6
	12/21/1999	96	75	3/31/2000	5	67	64	11

PacifiCare Behavioral Health project

Aggregate Outcome Report

(Provided monthly to senior system administrators)

Provider ID: Combined
 Date of report: 5/8/2000

PacifiCare Behavioral Health project

Cases included in this report began treatment between 3 months and 15 months prior to the date of the report.

Age Group Severity at intake	Total Cases	> 1 data point		Change (effect size)		Change Index (actual-expected)
		Number cases	Sessions/Case	actual	expected	
Adults						
Normal range	952	303	6.27	-0.05	-0.15	0.11
Mildly distressed	945	348	6.28	0.23	0.19	0.05
Moderately distressed	963	426	6.77	0.41	0.44	-0.03
Severely distressed	941	417	6.52	0.79	0.80	-0.01
Combined Adult	3801	1494	6.49	0.38	0.36	0.02

Children & Adolescents

Normal range	209	72	6.26	-0.09	-0.09	0.00
Mildly distressed	188	69	6.90	0.25	0.16	0.09
Moderately distressed	142	52	6.60	0.46	0.37	0.10
Severely distressed	225	69	5.78	0.50	0.42	0.08
Combined Child/Adolescent	764	262	6.37	0.27	0.20	0.07

Aggregate Results for All Age Groups

Total number of cases: 4565
 Number of cases with > one data point: 1756
 % of cases with > one data point: 38%
Sessions Per Case: 6.47

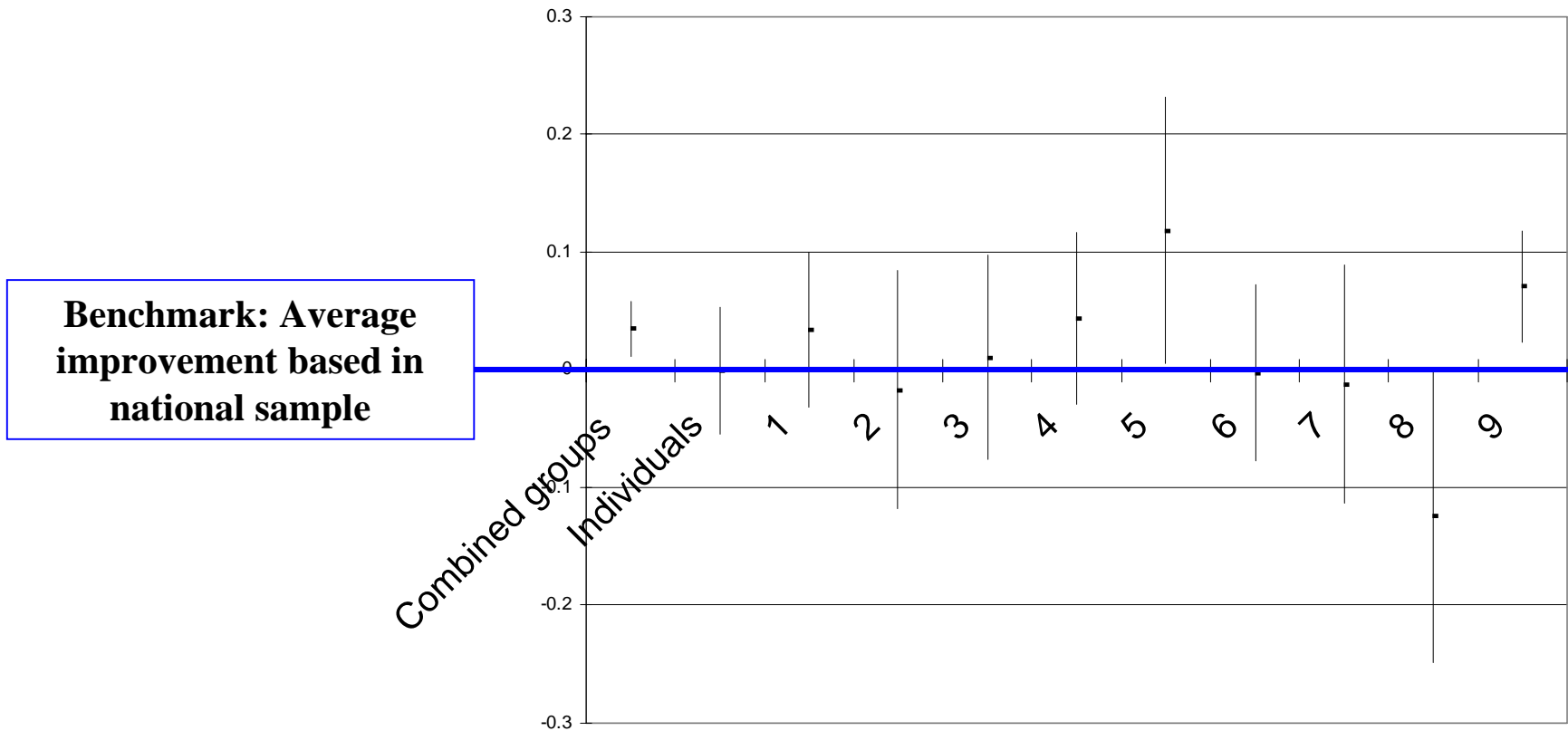
Change		Change Index (actual-expected)
actual	expected	
0.36	0.34	0.03

Above average

Comparing Results Across Sites



Change Index



Benchmark: Average improvement based in national sample

Allocation of Care

- Little difference in length of treatment between least and most distressed
- Patients in “normal” range tend to show no improvement
- Too many patients in severe range terminate prematurely, particularly if they are not improving

Research Support

Lambert M.J., Whipple J.L., Smart D.W., et al.

The effects of providing therapists with feedback on patient progress during psychotherapy: Are outcomes enhanced? *Psychotherapy Research*, in press.

This experimental study investigated the effect of use decision support algorithms targeting at risk cases at the Brigham Young University Comprehensive Clinic on the outcome and cost of care.

BYU Study

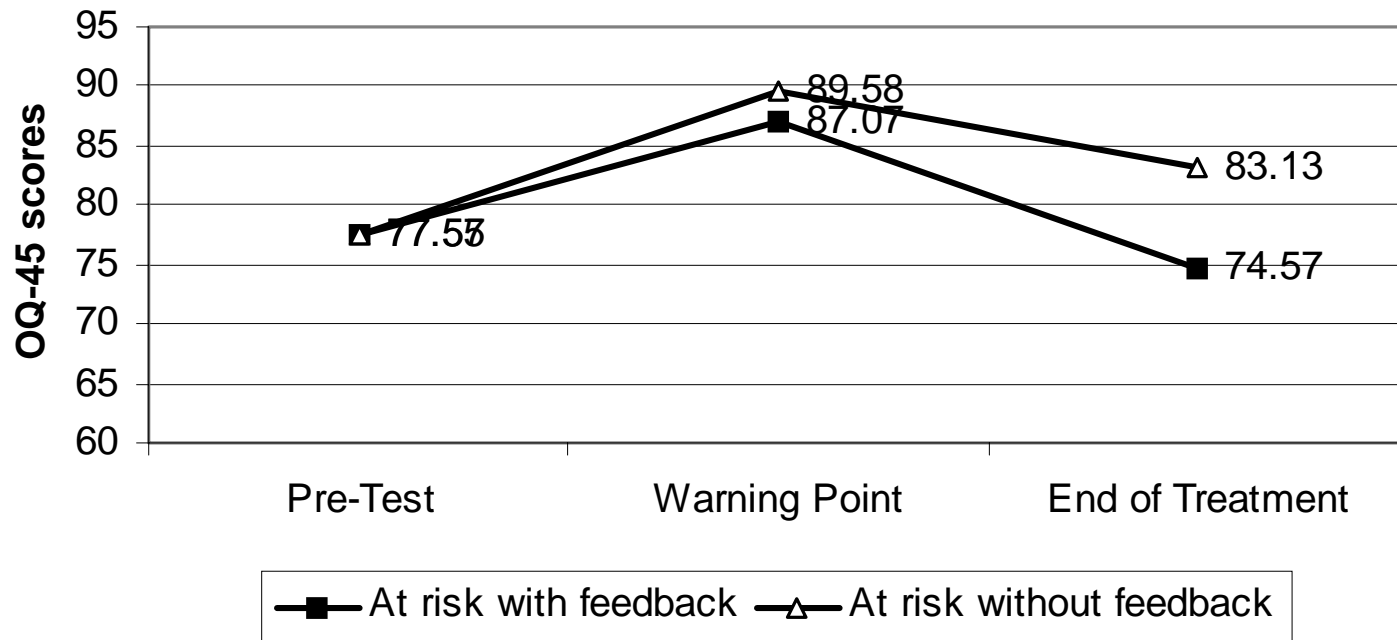
- All patients administered OQ-45 at every session.
- Half of cases assigned to feedback condition; half no feedback.
- Over 300 cases in each condition; 31 clinicians participated.
- Feedback provided information on patient improvement.
- 11% targeted as at risk for premature termination.

Results of Feedback

- At risk cases received twice the number of sessions in the feedback condition.
- Improved outcomes for at risk cases.
- Cases doing well received fewer sessions in feedback condition; outcomes the same.
- Feedback condition resulted in overall reduction in total number of sessions for sample.

Outcomes for At Risk Cases

Effects of Early Warning Feedback



Results of Feedback

- At risk cases received twice the number of sessions in the feedback condition.
- Improved outcomes for at risk cases.
- Cases doing well received fewer sessions in feedback condition; outcomes the same.
- Feedback condition resulted in overall reduction in total number of sessions for sample.

*<http://www.clinical-informatics.com>
jebbrown@clinical-informatics.com*

1821 Meadowmoor Rd.
Salt Lake City, UT 84117
Voice 801-541-9720
Fax 801-278-2329