

**Measuring Outcomes
from the Patient's Perspective**

January 2003 Status Report

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Measuring Outcomes from the Patient's Perspective Executive Summary

PacifiCare Behavioral Health's ALERTSM clinical information system has been listening to the patient for four years. This unique system assesses clinical outcomes by inviting patients to complete a 30-item questionnaire at regular intervals during treatment. This status report analyzes data from a total sample of 66,373 individuals, of which 7,783 are children or adolescents.

The ALERT data repository provides a unique perspective for understanding behavioral healthcare outcomes. In traditional research, design variables such as inclusion criteria, treatment method, and duration/intensity of treatment are carefully controlled. In contrast, PBH encourages patients and clinicians to exercise broad discretion regarding the method, intensity and duration of treatment.

In many respects ALERT data offer a more optimistic view of treatment outcomes than is represented by controlled clinical trials. For example, the ALERT data provide compelling evidence that a large percentage of patients experience significant benefit after a relatively short period of treatment and/or relatively few sessions. In a controlled study patients are often treated as dropouts and excluded from analysis if they have not completed the planned number of weeks/sessions of treatment. ALERT shows that in the real world patients utilizing few services and/or remaining in treatment for a short period of time generally achieve very good results. It should be noted that these short treatment episodes are decided at the level of the clinician-patient dyad, not by PBH utilization management decisions.

A primary function of the ALERT system is to encourage clinicians to keep patients engaged in treatment for a sufficient period of time to get the expected benefits. Patients exhibit wide variability in the number of sessions and/or weeks of treatment necessary to achieve results. ALERT shows that patients with high levels of distress and slow improvement tend to utilize more services over a longer period of time. Furthermore, even these slow responders continue to show a high probability of improvement if they remain in treatment. The data strongly suggest that patients and clinicians are doing a good job of tailoring the intensity and duration of treatment to meet the needs of the individual.

Other key findings include:

- Overall outcomes trended upwards during 2002.
- Adults and adolescents/children show similar rates of improvement
- Patient self-report of suicidal ideation and/or substance abuse problems can be used to improve clinician assessment of these risks
- The majority of patients reporting substance abuse problems at the start of treatment report improvement during the first six weeks of treatment

- Preferred group practices tend to have better outcomes while utilizing fewer sessions than solo practitioners

This report builds on previous annual reports, which can be viewed online at PacifiCare Behavioral Health's web site:

[2001 ALERT Annual Report](#)

[2002 ALERT Annual Report](#)

This 2003 status report will provide updated information on innovations to the system and the impact on treatment outcomes. Analysis will also be provided on the relationship between intensity of services and the patient's rate of change. An Excel based decision support tool for comparing change of an individual patient to the normative sample is included with this report.

Evolution of ALERT Technology

ALERT was first implemented in January 1999. The system was built to utilize two new outcome measures, the Life Status Questionnaire (LSQ) and the Youth Life Status Questionnaire (YLSQ). These questionnaires inquire about symptoms and problems that are common among consumers of outpatient behavioral health services. Higher scores indicate greater severity or distress, and improvement is measured by the reduction in scores over time. For more information, see the following section from the 2001 Annual Report: [Outcome Measures](#).

The ALERT system is a constantly evolving tool. Enhancements to the system are evaluated to gauge their impact on key quality indicators. In 2002 PBH built upon some earlier successful innovations.

At the start of 2001 the ALERT High Risk Letters were introduced. These are letters automatically generated by the ALERT system and mailed to the treating clinician that draw attention to risk indicators. These risks include poor response to treatment, patient self-report of suicidal ideation, and patient report of substance abuse problems. The letters encourage the clinician to keep the patient engaged in treatment and offer to authorize more intensive services as needed.

The following sections from the 2002 Annual Report describe these letters and their impact on assessment and management of at-risk cases.

[Improving Assessment and Management of At Risk Cases](#)

[Improved Treatment Engagement of At Risk Cases](#)

[Improved Suicide Risk Assessment](#)

[Improved Substance Abuse Assessment](#)

During 2002 the ALERT system was enhanced to include ALERT High Risk Follow-up Letters. These are sent out if no additional Y/LSQs are received within 45 days of the date when the first ALERT high-risk letter is sent. The letters explain the clinical concerns, encourage the clinician to keep the patient engaged in treatment, offer to authorize more sessions, and finally, ask the clinician to contact PBH if the patient has discontinued treatment.

Following is the text from an actual follow-up letter:

ALERTSM High Risk Follow-up

Date of report: 11/14/2002

RE: Patient Name

Several weeks ago we contacted you about this patient because we were concerned about one or more risk indicators. The last LSQ we received was dated 9/28/2002. The score was 102 which is in the **Severe** range of distress.

The primary reason we are contacting you is that the patient reported a high frequency of suicidal ideation. This patient's improvement is also significantly less than expected. Following are the responses on the risk items:

I have thoughts of ending my life.	<i>Always</i>
I feel hopeless about the future.	<i>Always</i>

The most recent LSQ score of 102 is significantly higher than the target outcome score of 53 or less. Patient's with a poor response to treatment tend to terminate prematurely without receiving optimal benefit.

If the patient is still receiving services from you, please continue to submit an LSQ questionnaire at the next session and every five sessions after that until treatment is completed. If the patient has discontinued treatment, please notify us. Thank you for working with us to provide the best care possible for this patient.

Perhaps the most important innovation during 2002 was the implementation of an automated utilization management process that encourages regular submission of outcome data and freely authorizes additional services. The system now automatically authorizes additional treatment each time PBH receives an outcome questionnaire completed by the patient. The number of additional sessions authorized varies with the severity of symptoms. Since an outcome questionnaire may be submitted for every visit, it is possible to accumulate authorizations faster than sessions are delivered.

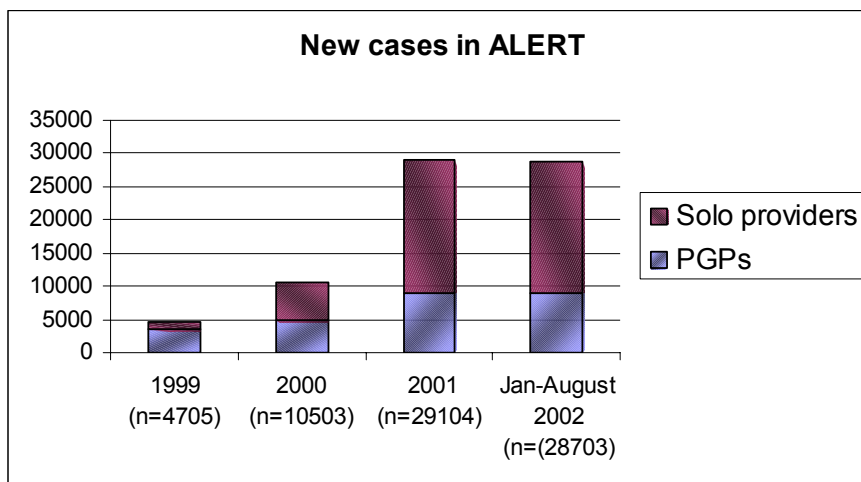
The automated linkage of authorization to submission of outcome questionnaires is designed to reduce the administrative burden on the clinician. The treating clinician is no longer required to routinely request authorization for additional services by providing information on diagnosis and treatment plan to justify the need for treatment. The clinician is free to focus on helping the patient achieve his or her goals for therapy.

Description of the Sample

The patients included in this report began outpatient treatment between January 1 of 1999 and August 31 of 2002. The total sample includes 66,373 individuals, of which 7,783 are children or adolescents.

The following graph shows the number of cases each year, broken out by whether the patient was treated at one of over 60 Preferred Group Practices or by one of the over 5,000 solo clinicians who have submitted data.

Preferred Group Practices (PGPs) are organized multidisciplinary group practices. Patients are referred to the group rather than an individual clinician. Solo clinicians are designated as such if they are not associated with one of the designated PGPs. It does not necessarily imply that they practice entirely from a solo office.



As the chart demonstrates, almost as many cases entered the system in the first eight months of 2002 as in all of 2001. At the present rate of new cases, ALERT will reach a milestone of 100,000 total individuals in the database during the first quarter of 2003. Overall, 48% of the cases have multiple assessment points in treatment. This is certainly one of the largest databases on behavioral health outcomes in the world.

Note that the total number of cases over 4 years exceeds the total number of individuals in the database. This is due to the fact that some patients seek services in more than one year. If a patient reenters treatment in a subsequent year, he or she is counted as a new case for that year.

The adult sample is three quarters (75%) female, while the child/adolescent sample has more nearly equivalent numbers males and females (47% female, 53% male).

The following table provides percentages of diagnoses, organized by broad diagnostic groups. These diagnoses have been submitted by the treating clinician on the Practitioner Assessment Report (PAR).

Adults		Children/adolescents	
Adjustment disorders	26%	Adjustment disorders	12%
Anxiety disorders	11%	Anxiety disorders	21%
Bipolar disorder	5%	Attention deficit/hyperactivity	9%
Depression	49%	Behavior disorders	9%
Other disorders	6%	Bipolar disorder	4%
Psychotic disorders	<1%	Depression	35%
Post traumatic stress	2%	Other disorders	7%
Substance abuse	1%	Post traumatic stress	2%
		Substance abuse	1%

The Value of Real-world Data

There are significant differences in what can be learned from ALERT data compared to what can be learned from traditional research studies. The differences are fundamental and stem from the fact that the ALERT system is measuring the impact of a system of care in which patients and clinicians have broad discretion as to the method, intensity and duration of treatment.

PBH makes every effort to ensure easy access to outpatient services and to keep patients engaged in treatment until benefit is realized. The ALERT system monitors the improvement of each patient as care is delivered, and clinicians receive calls from PBH care managers and ALERT letters encouraging them to keep patients engaged in treatment until the patient reports improvement.

The ALERT data cannot answer questions about the differential effectiveness of specific treatments for specific disorders. Nor can the data prove the effectiveness of treatment compared with no treatment. Well-controlled research studies are designed to answer these questions, but to do so it is necessary to place restrictions on patient selection, treatment methods, and the duration and intensity of treatment. In well-controlled studies, patients are randomly assigned to one of two or more treatment conditions, or possibly to placebo control, no treatment, or a waiting list.

Randomized controlled clinical trials are intended to learn about the disorder and the treatment, not the effectiveness of an individual clinician at facilitating patient change. There is a large body of controlled research that demonstrates patients receiving active treatment fare better than those receiving no treatment or placebo treatment. At the same time there is also substantial evidence that the most widely used and studied psychotherapies are equally effective (Assay and Lambert, 1999; Wampold, 2002).

However, the need for controls in clinical research limits the applicability of these research findings to the real world. Providers of care in the real world cannot duplicate the conditions of a research study, nor do they have the luxury of deciding which patients to include or exclude.

Because PBH provides open access to behavioral health care services, the range of severity of symptoms is much larger in the ALERT sample than commonly encountered in research studies. Many of the individuals seeking services report relatively mild levels of symptoms, a level more characteristic of normal life distress than mental illness. Such individuals are usually not included in research studies investigating the effectiveness of different treatments. At the other end of the continuum, many patients with severe symptoms may be suffering from more than one disorder. Such multi-problem patients with co-morbid conditions are also excluded from many research studies.

Most research studies are of relatively short duration, usually 16 weeks or less. Patients that fail to complete the study may be excluded from the final analysis of the treatment's effectiveness. By contrast, patients in the PBH system of care have broad latitude to determine the length of treatment. While some are involved for a very short period of time, many others are receiving services for months or even years longer than a typical study.

In the PBH system, access to care is encouraged and no one is excluded. In evaluating the effectiveness of the services, all individuals completing the outcome questionnaires have equal weight in results, regardless of diagnosis, severity of symptoms, or duration of treatment. A patient who drops out of treatment prematurely with worsening symptoms has as much weight in the final analysis as a patient with a much longer treatment episode and a highly satisfactory outcome. For this reason the ALERT data repository is a unique resource for understanding the effectiveness of real world behavioral health services from the patient's perspective. The kind of information gleaned from this data repository can never be obtained from controlled research studies.

The PBH clinician is expected to engage patients in an effective therapeutic process and to keep patients engaged until the desired improvement is realized. The ALERT system measures the effectiveness of clinicians helping individual patients, not the power of treatments to cure diseases.

There is one final and fundamental difference between the ALERT outcomes management system and a research study. ALERT is not just measuring outcomes. The system itself is attempting to positively impact outcomes by identifying the most distressed patients and encouraging clinicians to keep them engaged in treatment.

The immense value of real-world data is hopefully quite clear, and so now the question shifts to the value of real-world treatment. Over all, patients seeking services through PBH tend to show improvement throughout their episode of care. Patients entering treatment reporting high levels of psychological distress average much more improvement than patients reporting minimum levels of distress. The average rate of improvement is highest for all patients during the first few weeks of treatment, and this is especially true for individuals reporting frequent and severe symptoms. For a more complete discussion on benchmarking outcomes and modeling trajectory of change, the interested reader is referred to the Appendix: Understanding Outcomes.

Monitoring for Under Utilization

The ALERT system is designed to help ensure that patients receive an adequate level of treatment, both in duration (time) and intensity (number of sessions). Analyses have been conducted to detect any potential signs of under utilization of services in the PBH system of care, and these studies also explore the relationship between intensity of services and outcome.

The most accurate way to determine the intensity of services is through claims-based reporting. However, for this analysis the intensity of services is determined by using the session number submitted on the Y/LSQ. Previous analyses of claims data indicate that the actual number of sessions delivered tends to be about 25% higher than the estimate obtained from Y/LSQ questionnaires. Accordingly, the session number from the Y/LSQ can be used as a reasonable proxy for estimating intensity of services.

If patients receiving more treatment achieve significantly better outcomes than those receiving relatively few sessions, this might be taken as evidence that those with fewer sessions are not getting the intensity of services they need. In other words, this could be seen as possible evidence of under-utilization of services. Outcomes might then be improved by increasing treatment intensity. The clinical outcomes within the ALERT database do not follow this pattern in any way. Instead, patients with very few sessions have outcomes comparable to or better than patients with significantly more sessions.

While it may seem surprising that more treatment generally does not produce better outcomes, it is easily understood when one examines a real-world system of care. PBH provides open access to outpatient services, regardless of the severity of complaints. Patients and clinicians have broad latitude to determine the number and spacing of sessions. In this kind of environment the patient's need for services becomes the primary driver of service utilization. PBH encourages individuals to seek treatment when they experience psychological distress and to continue until they feel better.

In a healthcare system that gives individuals the freedom to find the level of services appropriate for them, patients with few sessions will not necessarily have worse outcomes than higher utilizing patients. Many patients respond very well in the first few sessions and leave treatment with significant improvement. Furthermore, patients with higher levels of distress tend to utilize more sessions than those with less severe problems. Patients that improve slowly also tend to utilize more sessions than those reporting rapid improvement. All of these factors combined suggest patients utilize the level of services they need, and systems of care like PBH are not marked by under-utilization.

In order to better understand the relationship between the intensity of services and outcome, a sample of adults was identified with LSQ scores at intake and repeated measures again after 10 to 12 weeks of treatment. Cases were eliminated from the analysis if LSQ session number was missing or if the session numbers did not appear consistent from one measurement point to another. For example, if a session number at one assessment point was lower than that of an earlier date, the case was eliminated. Likewise, cases at the extremes were eliminated. Any case with a session number of less than 3 at weeks 10 to 12 was eliminated, as was any case with a session number greater than 30. While this substantially reduced the number of cases available for analysis, this procedure increases the likelihood that the session number variable is a reliable indicator of treatment intensity.

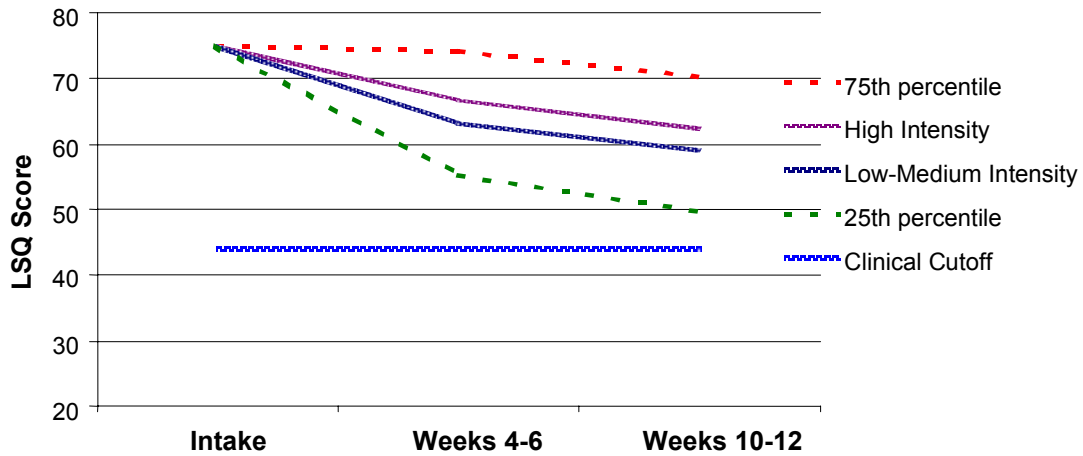
Using these criteria, a sample of 1,722 adults was analyzed. While all of these cases remained in treatment for at least 10 weeks, they varied in terms of the number of sessions used during this time. It should also be noted that 514 of these cases (30%) contained an assessment at weeks four to six. The cases are divided into three intensity groups based on the number of sessions used by weeks 10 to 12.

- High intensity: 10 or more sessions (23% of cases)
- Medium intensity: between five and nine sessions (55%)
- Low intensity: three or four sessions (22%)

As expected, patients receiving high intensity services average higher scores (mean LSQ=60) at intake than those receiving lower intensity services (mean LSQ=55; $p < .001$). In order to test for an interaction of intensity of services, severity (intake scores) and outcome (change scores), analysis of variance was performed. The intake scores and intensity of services were treated as independent variables, and the change score at weeks 10 to 12 served as the dependent variable. There is a positive relationship between severity at intake and change ($p < .0001$). However, patients receiving high intensity services average less improvement than those in the low and medium service intensity groups combined ($p < .001$). The difference between the low and medium intensity groups is small and not statistically significant.

The following graph displays the average trajectory of change for cases receiving high intensity versus low-medium intensity of service. For purposes of illustration, this graph displays results for patients who began treatment with LSQ scores in the severe range. The graph utilizes regression techniques to model the relationship between scores at different points in time. Red and Green lines indicate the estimated 75th and 25th percentiles for the distribution of scores around the mean of the sample. These lines show the expected distribution of scores for all patients with an intake score of 75, which is the mean score for patients in the severe range.

Trajectory of change for high and low intensity services cases



The reader is encouraged to download this file and enter different intake scores in order to better visualize the relationship between severity, intensity of services and time.
Download: [low-med high intensity services.xls](#)

For more information on trajectory of change graphs, view the [Appendix: Understanding Outcomes](#).

The finding that higher scores and a slower rate of change are associated with using more sessions is consistent with the assumption that the utilization of services is a function of the patient’s level of distress. The higher utilization of services by patients in great distress is also a reflection PBH’s efforts to direct treatment resources towards those patients most in need.

The total duration of treatment also appears to be a function of patient distress and the speed of improvement. A sample of 12,968 adults was studied that had an LSQ at intake and a final LSQ collected between two weeks and one year of the first LSQ. Of this sample, 3,174 cases (24%) had a final LSQ submitted within four weeks of the intake. These cases were compared to 2,148 (17%) with a final LSQ between six and twelve months of intake. Patients with more than six months of treatment averaged higher intake scores than those with less than four weeks (56.5 versus 53.5; $p < .001$). However, the patients with the shorter length of treatment averaged slightly more change (5.7 versus 5.4 points improvement; $p > .1$).

These results provide strong evidence that when given ready access to behavioral health services consumers seek the intensity and duration of services that are appropriate to their needs. Consumers will not over utilize services if their needs are met effectively. Almost a quarter of the sample studied had fewer than 5 sessions in a three-month period,

yet these cases did not differ in outcome from those receiving more sessions. Likewise, a quarter of the sample had a final assessment after less than 4 weeks of treatment, yet their results are comparable to those with over six months of treatment.

Many patients in the ALERT database utilize few sessions, and this is clearly not a function of PBH limiting care or evidence of under utilization. Instead, the low utilization of services is evidence of the effectiveness of the care received.

The Importance of Keeping Patients Engaged in Treatment

While the previous analysis demonstrated that patients with rapid improvement tend to utilize fewer sessions, our next analysis will focus on the risk that patients with little or no improvement may become discouraged and terminate treatment prematurely.

The trajectory of change graph in the prior section displays the distribution of scores at 6 and 12 weeks for patients beginning treatment with an LSQ score of 75 (severe range). Despite the fact that most patients improve and a substantial percentage show dramatic improvement, the trajectory of change graph also makes clear that even after 12 weeks of treatment 25% of the patients show little or no change (those above the red line for the 75th percentile). Many of these had LSQ scores that increased over time.

The importance of keeping patients engaged in treatment is demonstrated by examining the outcomes of a sample of patients with high levels of distress and little or no improvement after 7-9 weeks of treatment.

The patients in this sample were selected for analysis based on two criteria: an LSQ intake score in the severe range (>63) and a score at weeks 7-9 that was above the 75th percentile on the trajectory of change graph. Two hundred twenty (228) patients meeting these criteria were identified. The mean intake score for this sample was 77 points, and the average patient in this group was 2 points worse after almost 10 weeks of treatment (mean LSQ = 79).

It is easy to imagine that a patient with such a high level of distress and so little progress after an adequate trial of treatment would be discouraged. It's conceivable that many clinicians faced with such a treatment-refractory patient would begin to have diminishing expectations about the probability for improvement.

The ALERT data show this pessimism to be premature, *provided the patient remains engaged in treatment*. Of the 228 patients in this sample, 102 (45%) submitted LSQs at later sessions (beyond week 10), with a mean time from intake to last submission of 28 weeks. Those patients that remained in treatment averaged 10 points improvement from that point to the final assessment and eight points of improvement overall ($p < .001$).

However, as the sample shows, many patients fail to continue treatment despite the probability for improvement. When this occurs, it is a missed opportunity. Clinicians who excel at keeping these at-risk patients engaged in treatment will tend to have better overall outcomes.

The ALERT system assists clinicians in this task. All of the cases in the above example were targeted by the ALERT system as at-risk for premature termination, and clinicians received letters encouraging them to keep the patient in treatment. The 2002 Annual

Report describes the use of the ALERT letters to improve retention of at-risk cases. After implementing these letters in early 2001 the length of treatment for at-risk cases increased: [Improved treatment engagement of at risk cases](#).

The improvement noted in 2001 appears to have been maintained in 2002. The differences in results for solo clinicians vs. PGPs noted in the earlier report were not apparent in 2002. Still, it remains clear that keeping a high percentage of these slow responding patients in treatment is a major challenge for both the clinicians and PBH. The ALERT high-risk follow-up letters implemented this year should help to further reinforce for clinicians the importance of continuing to work with these at-risk patients.

Assessment of Suicidal Ideation

One of ALERT's important functions is to improve identification and management of patients reporting a high frequency of suicidal ideation. Prior annual reports have noted that clinicians appear to significantly under estimate the severity of both suicidal ideation and substance abuse problems. This is determined by comparing the clinician's report on the PAR to the patient's self-report on the Y/LSQ (within a two-week span of time). For example, prior to 2001 the treating clinician assessed that there was no suicidal ideation in more than 50% of the cases where the patient reported a high frequency of suicidal ideation. This is defined by a response of "Frequently" or more often on either of the following items:

	Never	Rarely	Sometimes	Frequently	Almost Always
I have thoughts of ending my life. (LSQ)	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
I think about suicide or feel I would be better off dead. (YLSQ)	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

The patient's report of suicidal ideation on the Y/LSQ has been found to be the single best indicator of future hospitalization. It stands to reason that making the clinician more aware of the intensity of the suicidal ideation facilitates more proactive discussion of risk with the patient, thereby better managing the risk and ensuring an adequate intensity of services for the patient.

The 2002 report describes the ALERT high-risk letters for patients reporting a high frequency of suicidal ideation. Part of the rationale for drawing the clinician's attention to any discrepancy between their assessment and the patient's self report is to encourage clinicians to place a high value on these questionnaires in the assessment process. The use of patient self-report questionnaires does not supplant the traditional role of the clinician in assessing and managing risk. However, it stands to reason that the clinician's ability to assess risk can be improved by the routine inclusion of information from the questionnaires.

PBH assesses the concordance rates for risk assessment each year. Concordance is defined as a certain degree of agreement between the two ratings. The procedure is to first identify patients reporting a high frequency of suicidal ideation on the Y/LSQ and then pair any PAR submitted for that patient within 14 days of the Y/LSQ. The clinician's assessment is considered concordant with the patient report if the clinician reports at least *Mild* ideation. If the clinician reports suicidal ideation as *None*, it seems probable that the clinician has significantly underestimated the risk. This is brought to his or her attention by way of an ALERT high-risk letter.

The ALERT letters for suicidal ideation are described in the 2002 report. The report provides evidence that the agreement between clinician assessment and patient self-report increased significantly after the letters were introduced: [Improved Suicide Risk Assessment](#). Brown et al. (2003) describe these efforts to improve the assessment of patients with suicidal ideation in an article appearing the peer-reviewed journal, [Crisis: The Journal of Crisis Intervention and Suicide Prevention](#).

Prior to 2001, the clinician assessment of suicidal ideation was in agreement with the patient's report less than 50% of the time, suggesting an unacceptably high rate of assessment errors. After implementing the letters the percent concordance increased to 63% in 2001.

This improvement has held constant in 2002. As noted in the prior annual report, clinician assessment of suicidal ideation is more likely to be concordant with the patient report for child and adolescent patients than for adults. Also, solo providers show concordance more often than clinicians within the PGPs, suggesting perhaps that the ALERT letters had less impact on clinicians working within the PGPs. The 2002 concordance rates for assessment of suicidal ideation are listed in the table below.

2002 Suicide Assessment Concordance Rates

	# Adult Cases	Clinician Assessment Agreement %	# Child/Adolescent Cases	Clinician Assessment Agreement %	Total Cases	Combined % Agreement
All clinicians	963	54%	566	69%	1529	60%
PGPs	303	43%	176	63%	479	51%
Solo clinicians	660	60%	390	71%	1050	64%

The assessments from solo clinicians continue to show greater concordance than for clinicians practicing within the PGPs. In the case of the PGPs, ALERT letters are addressed to the group practice rather than the individual clinician. If the PGPs are inconsistent in assuring that the letter is brought to the clinicians' attention, this may explain why the PGPs tend to have lower concordance. The clinicians within these practices may not be as sensitized to the importance of the patient self-report of suicidal ideation.

Substance Abuse Assessment and Management

Another important ALERT function is to improve the identification of patients with possible substance abuse problems. While this has been monitored for the past few years, a new analysis conducted for this report evaluates clinical improvement for these identified substance abusers over the course of treatment.

The LSQ includes three items that inquire about the use or impact of alcohol and/or drugs within the past week. The items are scored from zero (“Never”) to four (“Almost always”).

Item 11: I use alcohol or a drug to get going in the morning.

Item 20: People criticize my drinking (or drug use).

Item 24: I have trouble at work/school or other daily activities because of drinking or drug use.

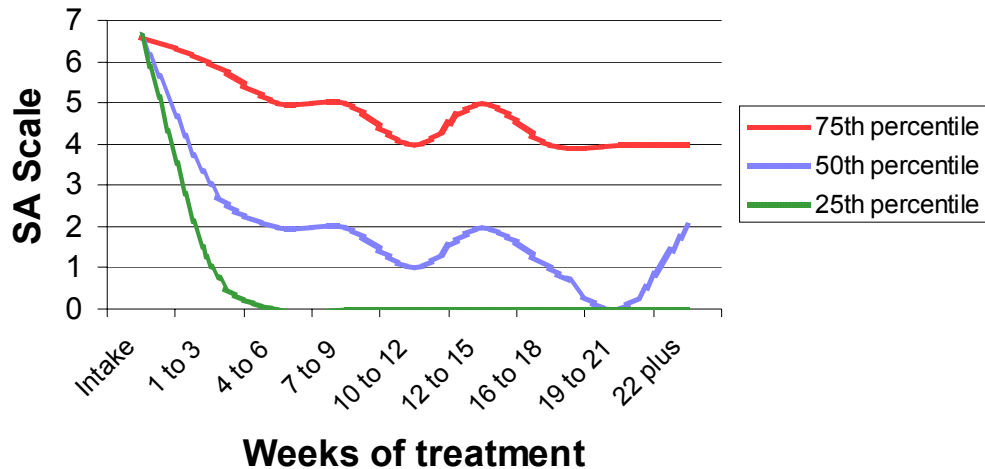
Patients with substance abuse problems are not necessarily expected to answer these items honestly. However, if a patient does respond positively to these items, it seems safe to accept this self-report as valid indicator of possible substance abuse.

The ALERT data suggest a very encouraging outcome for these identified individuals. In aggregate, individuals reporting substance abuse problems at the start of treatment report a rapid reduction in problems during treatment. To assess change in substance abuse problems, the scores for the above items were added together to create a substance abuse subscale (SA Scale) with a range from 0 to 12. Seventy eight percent (78%) of patients in the database have an intake score of zero on the SA Scale. Three percent (3%) have a score of five or higher. A sample of 585 patients with intake scores of 5 or higher and at least one subsequent complete SA Scale were used to analyze change.

The mean SA Scale score at intake for this sub-group of self-identified substance abusers was 6.6, meaning that the average response on the items was “Frequently.” Considering that the LSQ inquires about experiences over the past week, these scores can be taken as face valid evidence of the impact of substance abuse on these patients.

The following Trajectory of Change graph shows the rapid reduction in scores experienced by these patients. By week six over 25% of this sample had a score of 0 on the SA Scale. Fifty percent (50%) had a score of 2 or less by the end of treatment, meaning that the average response on each item was less than “Rarely.” It appears that relatively brief outpatient treatment is highly effective for this self-identified group with substance abuse concerns. One could hypothesize that their openness to disclosing the problem at the start of therapy reflected a readiness to make changes.

Trajectory of Change for Substance Abuse



[Improving Assessment and Management of At Risk Cases](#)

The 2002 ALERT Annual Report describes efforts to improve clinician’s identification of substance abuse problems. As in the case of assessment of suicidal ideation, the clinicians’ assessment of a substance abuse problem is compared to the patient self-report of problems. The clinician assessment appears to frequently under-estimate the severity of the problem. In light of the evidence that these patients benefit from treatment, it is imperative that patients with substance abuse difficulties are identified and remain engaged in treatment.

Very few patients in the ALERT data repository have a primary diagnosis of substance abuse or dependence. Of those cases for which a diagnosis is available from the PAR, only 1% have a primary substance use diagnosis. However, the PAR item inquiring about the current abuse of alcohol or drugs seems to be a more sensitive indication of problems since 6% are coded *Yes*.

When PAR assessment based on this item is compared to the patient self-report, well under 50% of the patients disclosing substance abuse problems are recognized by the clinician as having one (i.e., they failed to answer the PAR substance abuse item as *Yes*). Our analysis of concordance rates starts by identifying a patient as probably having a substance abuse problem if he or she responds “Sometimes” or more frequently to either of items 20 or 24 from the LSQ, or item 10 from the YLSQ (“I use alcohol or drugs.”). LSQ item 11 (inquiring about use of alcohol/drugs in the morning) was not included as a criterion in this analysis because it tends to have false positive responses. PBH clinicians have determined that some patients interpret the item to include the use of coffee and/or cigarettes, which tends to inflate the response rate on this item.

The 2002 report provides information on the ALERT letters for substance abuse: [Improved Substance Abuse Assessment](#). The rate of concordance increased from 1999-2002 to 2001. Prior to 2001, clinicians assessed the presence of a substance abuse problem for less than 20% of the individuals self-reporting a problem. After the ALERT letters were implemented in 2001, the concordance rate increased to over 30%, still low but a statistically significant improvement ($p < .001$).

The following table provides a break down of clinician assessments for self-identified substance abuse cases during 2002. The improvement noted in 2001 was maintained in 2002. Unlike the concordance rate for assessment of suicide ideation, there were no significant differences between solo clinicians and those within the PGPs.

	# Adult Cases	Clinician Assessment Agreement %	# Child/ Adolescent Cases	Clinician Assessment Agreement %	Total Cases	Combined % Agreement
All clinicians	2208	33%	683	27%	2891	32%
PGPs	752	32%	222	29%	974	32%
Solo clinicians	1456	33%	461	25%	1917	32%

The low rate at which these patients were assessed by the clinician as having a substance abuse problem speaks to the importance of clinicians utilizing information provided by the patient. While many patients with substance abuse problems may be assumed to minimize these problems, substantial percentages appear to be willing to acknowledge problems via questionnaires. These patients have a substantial probability of improvement, and it behooves the clinician to focus on these problems and keep the patient engaged in treatment until substance abuse problems are resolved. The ALERT system aids in this process.

Effectiveness of Group Practices

The 2002 ALERT Annual Report noted that Preferred Group Practices (PGPs) tended to show better overall outcomes than individual clinicians. PGPs achieved these superior outcomes using fewer sessions as well. ([2002 Aggregate Results](#)) This pattern remained consistent throughout 2002 even as the number of groups and solo clinicians participating in ALERT increased. Several outside researchers have analyzed these data and the results have been submitted for publication to a peer-reviewed academic journal (Brown et al., manuscript under review).

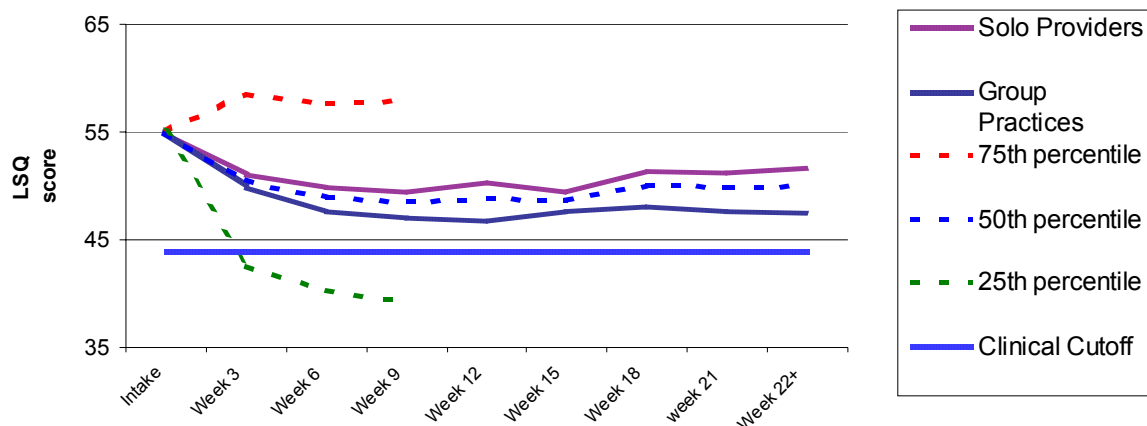
PGPs continued throughout 2002 to show superior outcomes to individual clinicians, both overall and with patients in the severe range of distress. The overall effect size for PGPs in 2002 was .48, compared to .32 for solo clinicians ($p < .00001$). The PGPs' effect size is 150% that of the solo clinicians.

The average session number for the last data point for solo clinicians is 10, while 7.5 is the last data point for PGPs. Analyses of claims data confirmed that the average cost per case seen by a PGP was about 75% that of one seen by a solo clinician. This suggests that PGPs average twice the improvement per dollar expended compared to the solo clinicians. The fact that over 30% of PBH members are treated by one of the PGPs has a significant impact on the overall cost and outcome of care.

The following Trajectory of Change graph provides some insight into why the cost of care is lower for the PGPs. The graph plots change for patients with an intake score of 55, which is the mean intake score for the entire PBH sample. The graph demonstrates that the rate of change is faster for PGP patients during the first six to nine weeks than for solo clinicians, in addition to the overall change being significantly greater.

One likely conclusion is that this faster rate of change results in lower overall need for services, consistent with the earlier finding that higher utilization is associated with slower change. This difference in the rate of change is present across a wide range of intake scores. The reader is invited to download the accompanying Excel file with the Trajectory of Change graph for PGPs and solo clinicians. Entering different intake scores permits the reader to view the different trajectories.

Trajectory of Change for PGPs and Solo Clinicians: [Group versus solo.xls](#)

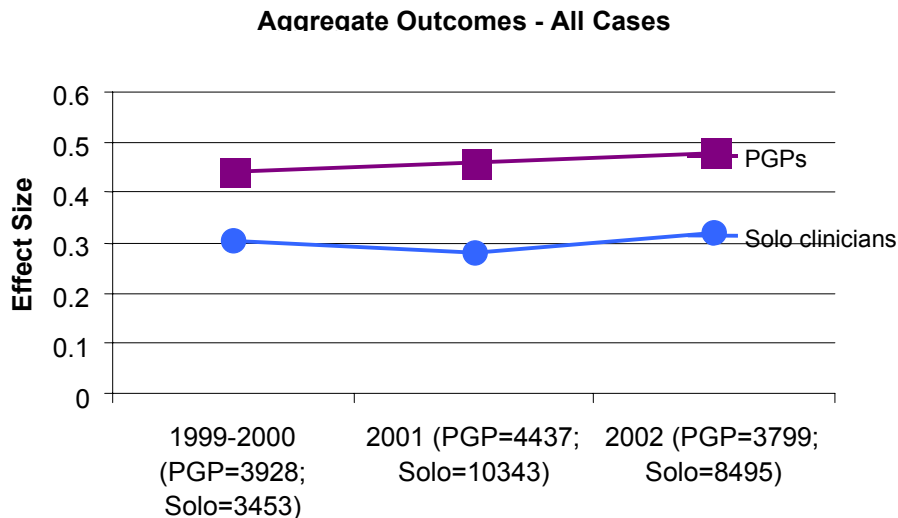


The reasons why PGPs have better results cannot be discerned from the present data. However, the presumption would be that PGPs are in some way more effective at clinical management. Whether this is due to better matching of patients with clinicians by the group, superior coordination of care, or other unidentified processes is unknown at this time. These questions will be the subject of future research.

Are Outcomes Improving?

The overall effect size for patients in the ALERT database is slightly higher in 2002 than in previous years. The effect size statistic is a method for expressing change scores in a standardized form, permitting the merger of results using different instruments (as is the case with the LSQ and YLSQ). See the appendix Understanding Outcomes for a more complete discussion of PBH's methods for reporting outcomes and adjusting for case mix differences in diagnoses and severity.

The following graph displays the severity-adjusted effect sizes for PGPs and solo providers broken down by year.



The graph shows a slight upward trend from 2001 to 2002 for both PGPs and solo clinicians. In fact, the combined effect size for all cases increased from .34 to .38 between 2001 and 2002 ($p < .001$). The magnitude of the increase, though statistically significant, is modest and difficult to interpret. The overall pool of clinicians and group practices increased in 2002, and so the change in results could be partly due to a different mix of clinicians. Nevertheless, the trend is encouraging.

One technical result of this upward trend in effect size is the updating of the case mix adjustment model utilized by the ALERT system. In other words, since results are improving, the benchmark is raised for expected performance. This is not the first time such an increase has been implemented in the system. This was also done at the end of 2001 ([Assessment Tools and Benchmarks](#)). The net result of updating the norms for 2003 is that the average patient is now expected to show more change, by a margin of .02 effect size, than the previous model projected. For more information regarding the ALERT case mix model, see the appendix: [Updated norms for change](#).

Summary and Recommendations

The empirical findings of ALERT constitute good news for consumers and providers of behavioral health services. ALERT provides compelling evidence that open access to services results in many patients achieving rapid improvement in a cost-effective manner. In addition, those patients most in need, with the highest levels of self-reported symptoms and problems, are the ones most likely to experience a significant reduction in distress in a relatively short period of time. Consumers and clinicians seem to collaborate well in determining the appropriate intensity of services, and a significant percentage of patients are being treated effectively with relatively brief treatment episodes.

One of the keys to good outcomes is keeping the most distressed patients engaged in treatment until benefit is realized. Patients with very mild levels of distress can be treated with few sessions and do not as a rule show greater benefit with longer periods of treatment. However, for patients with severe distress, there exists substantial variation in the speed at which individuals respond to treatment. Failure to improve rapidly does not necessarily lead to a poor outcome. Patients with severe symptoms that fail to improve within 10 weeks still have a substantial probability of future benefit if they remain engaged in treatment. Both clinicians and patients have reason to remain optimistic even if treatment does not appear immediately effective.

This is not to say that clinicians should simply continue the same treatment methods when patients are not improving. A change may be necessary, particularly if altering the treatment methods increases the probability that the patient will remain engaged. PBH uses ALERT findings to identify patients in need of care management. When patients show high-risk patterns, PBH care managers call the treating clinician to explore whether treatment services should be intensified or modified in some way. Consideration is given to arranging specialized assessments, such as a medication evaluation, and new modalities, such as family therapy, are evaluated as additional components of the treatment plan.

While the essence of the ALERT system is listening to the patient and bringing the patient's rating of problems into the process of outpatient care, ALERT is also about giving valuable clinical feedback to the treating clinician. Past enhancements to the ALERT feedback process have resulted in improved outcomes, and in 2003 greater focus will be brought to *what* is shared with clinicians and *how* it is shared. This analysis will start by conducting focus groups with clinicians with the most experience submitting Y/LSQs and receiving ALERT feedback. Academic researchers with expertise in the process of providing feedback will be consulted as well. The goal is to have clinicians take greater advantage of the risk warnings generated by ALERT.

A related goal for 2003 is to increase the concordance rates for ratings of suicidal ideation and substance abuse problems. The weaker performance of PGPs relative to

solo clinicians regarding suicide assessments will be a specific focus. The unacceptably low rate of concordance for substance abuse problems overall will also be targeted for improvement.

In 2002 the submission of Y/LSQs was electronically tied with the authorization process in a manner that not only simplifies getting more sessions authorized, but also increases the likelihood of Y/LSQs being submitted. As use of the questionnaires gains wider acceptance and clinicians take advantage of the information offered by their patients, there is every reason to be optimistic that outcomes will continue to improve. Improvement was noted in 2002, and so now the bar has been moved higher. The 2003 benchmark has been raised so that the average patient is now expected to show more change, by a margin of .02 effect size, than the previous model projected. This epitomizes the uniqueness of ALERT. The goal is to not simply measure outcomes, but to constantly improve them.

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