Clinical Outcomes Tracking

IMPROVING RESULTS FOR PATIENTS, PAYERS, AND PROVIDERS





Request a demo

trac9.com



Table Of Contents

What Outcomes Should Providers Track?	5
How Does Tracking Outcomes Help Patients?	8
How Does Tracking Outcomes Help My Facility?	9
How Does Tracking Help Therapists Improve Their Work?	10
How Trac9 Does Tracking	12
Contact Trac9	13



Jared P. Dempsey, Ph.D. serves as Chief Scientist at Trac9 Informatics. Dr. Dempsey is actively involved in neurological and physiological research in addiction. Recent publications include preliminary evidence for a biological marker of addiction recovery, non-conscious emotional response to drug stimuli, and the influence of social anxiety on addiction treatment.

Dr. Dempsey has also served as an expert reviewer for the Journal of Motivation and Emotion, Psychopharmacology, Journal of Psychopathology and Behavioral Assessment, American Journal on Addictions, Addiction, Psychiatry Research, European Psychiatry, Nicotine and Tobacco Research, and the Journal of Studies on Alcohol and Drugs. Dr. Dempsey was also actively involved in the development of a comprehensive symptom tracking and outcome data collection tool for addiction treatment, TRAC9.

The fields of behavioral health and addiction recovery services are ever-growing and evolving. The latest and greatest forms of treatment shift over time. **Every facility wants to be on the cutting edge of treatment and provide the best care to its patients**. Tracking outcomes plays a significant role in a provider's ability to continuously improve care. In fact, simply the act of tracking outcomes has been shown to improve patient care. **(Lambert, 2010)**.

Leading facilities have stopped to consider their own answers to the following questions:

- How do you know if what your organization is doing is really working?
- What are you doing to quantify your successes?
- How are you learning what you can do to improve?

Our founder at Trac9 Informatics, Dr. Jared Dempsey, asked these exact questions while looking across the field of behavioral health. Over the past few decades, the number of providers, as well as both public and private capital dedicated to addiction and mental health services, have increased exponentially, while drug overdose rates remain on the rise (Ahmad, et al., 2021).

Working with Dr. Kitty Harris, Dr. Dempsey quickly noticed the field was missing an important piece. **They quickly realized that there was no standardized system of measurement being used to track patient improvement during care,** much less predictive analytics that allow for optimal alignment of patient, provider, and treatment protocols. With a combined 55 years of experience in the addiction treatment and research fields, Dr. Dempsey and Dr. Harris decided to develop Trac9 in order to fill that gap.

Dr. Dempsey and the team at Trac9 worked together to develop software and machine learning algorithms specifically designed to capture this data and provide a clear path forward for providers looking to improve treatment outcomes for patients. Using data analyzed from over 300,000 assessments and 60,000 patients across the country, significant insights into what outcomes to track and how best to use the collected data will be provided throughout this paper.



Kevin is the Managing Director with overall responsibility for leading Trac9. He has been with Trac9 since 2017 as the technology and engineering lead. Kevin has over 35 years of business and technology leadership experience. He was previously a partner in Accenture, a global technology consulting firm. He was then a GP in a private equity firm and early stage investment partnerships focused on innovative technology companies. He currently serves on the Board of HealthPrize Technologies, a software company that improves medication adherence and reduces total cost of care. He is the Founder and CEO of Ambio Health, the developer of an FDA cleared Remote Patient Monitoring product and the core technology behind Trac9.

Kevin serves on the Boards of both the Family Resource Network and the Society for Evidence-Based Treatment. Kevin graduated from Cornell University with a BS in Operations Research and Industrial Engineering.

How to Track: The Use of Standardized Assessments

Nobody wants to reinvent the wheel and there are a host of existing psychometrically validated assessments to choose from in order to measure patient progress. Rather than start by determining what you want to measure and then trying to figure out how to do so, look at what assessments currently exist that have been empirically validated in the scientific literature. After all, people don't create assessments unless the data is worth tracking, so we can be confident that the outcomes measured by these tools are putting us on the right track.

However, one of the challenges within behavioral health, and substance use disorder, in particular, is a lack of standardized clinical outcomes tracking. **Many providers cite this lack of consensus as a primary reason for not getting started with outcomes tracking.** The lack of consensus also makes it difficult to compare results between treatment providers. While we can identify the assessments to use, this doesn't necessarily help us compare data across programs or to any kind of national standards.

A solution to this problem is to utilize psychometrically validated instruments for a particular outcome, determine equivalency across instruments, then compare. This sounds a bit complicated if you are not familiar with instrument design and statistics, because it is, so we'll provide an example to help.

"Trac9 only uses standardized, science-based instruments," said Dr. Jared Dempsey, Chief Scientist at Trac9. "There is a group of assessments that we believe are critical to monitor patient progress and ensure optimal chance of long-term, sustained recovery. Helping improve patient care and move the field forward provides a lasting impact for countless lives."

Let's say we have two facilities. One uses the **Beck Depression Inventory (BDI)**, which has its own scoring system. The other facility uses the **Clinically Useful Depression Outcome Scale (CUDOS)**, which has a different scoring system. Even though they use different scoring systems, they're measuring the same thing, in this case, severity of depression. So we simply match question types, then create a single scoring system from 0 to 100 and, finally, convert each assessment to a composite scoring system to compare results.

If that sounds like a lot of work, it is! Our goal with Trac9 is to eliminate the need for individual programs to come up with complex systems in order to compare themselves to other facilities or national benchmarks. Trac9's software does all of the heavy lifting by using standardized and pyschometrically validated instruments across outcomes factors. Then we go a step further and create a Global Recovery Score to easily compare aggregate outcomes. Trac9 uses nine separate gold standard assessments that we then aggregate into a Global Recovery Score.

Here is an introductory list of scientifically validated assessment tools available to providers for free:



Worry and Anxiety Questionnaire (WAQ) (Dugas, et al., 2001)



Quality of Life

MOS 36-Item Short Form Survey (SF-36) (RAND)



Depression

A Clinically Useful Depression Outcome Scale (CUDOS) (Zimmerman, et al., 2008)



Craving

Brief Substance Craving Scale (BSCS) (Somoza, et al., 1995)

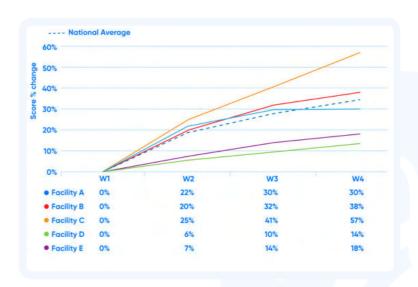


Post-Traumatic Stress

PTSD Checklist - Civilian Version (PCL-C) (Ruggiero, et al., 2003)

Our commitment to science is one of the things that really sets us apart," said Dr. McKenzie Wilkes, Trac9's Associate Executive Director with over ten years of experience in the field of addiction recovery research and training. "That's why we have several data scientists on staff and only use goldstandard instruments.

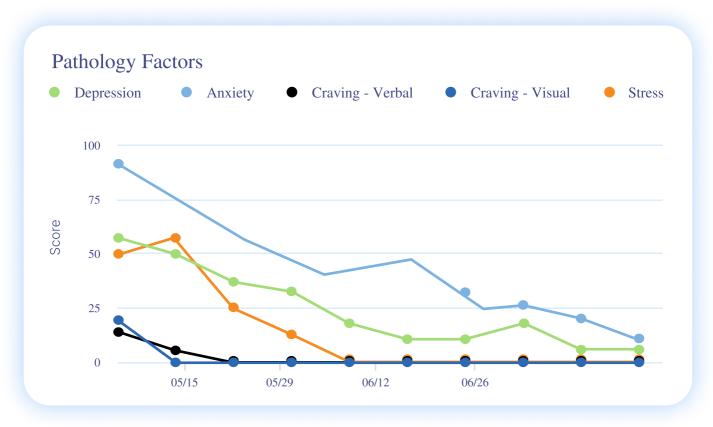
The gold-standard instruments are the normed, validated and standardized questionnaires that Trac9 utilizes to help patients collect information from patients about their pathology and resilience factors. By using a wide array of assessments, Trac9 enables facilities to have an extremely high degree of confidence in the predictive validity of patient outcomes being tracked, as well as the ability to compare results over time and against national averages.



Additionally, by using a battery of assessments, providers can track patient progress across multiple variables such as general mood, stress, cravings, etc. This allows clinicians to not just understand the general trend of whether or not a patient is improving, but helps them pinpoint exactly what's working or not working in order to tailor the patient's treatment plan for optimal results.

What Outcomes Should Providers Track?

The outcomes we selected to measure at Trac9 were not chosen simply based on industry standards or theories around best practices for addiction treatment. Instead, **Trac9 selected these factors based on peer-reviewed scientific research**, which demonstrated time and time again that these are the factors which are most closely linked to success and failure in recovery **(Chambless & Ollendick, 2001; Loeber, et al., 2006; Panlilio, et al., 2021)**.

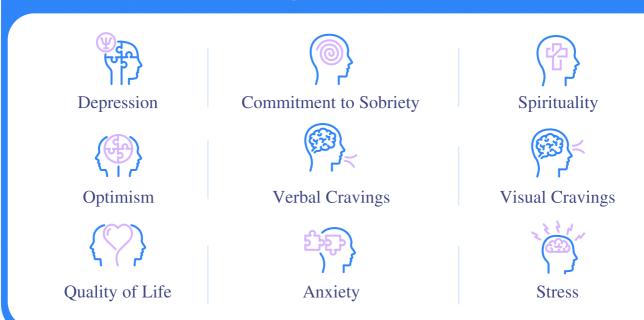


Through analysis of a wide array of research across the field, and now through real-world validation using its own software, Trac9 has identified the five most important pathology factors, as well as the four most important resiliency factors when it comes to addiction recovery. The pathology factors that act as clear indicators of elevated risk of negative outcomes are Depression, Anxiety, Stress, Verbal Craving, and Visual Craving. By monitoring and reducing these pathologies through therapeutic interventions, providers can measurably improve patient outcomes (Lyon, et al., 2015).

Pathology factors are the factors that are most likely to lead a patient to relapse in their treatment. The goal is to see these factors decrease over time.

The resilience factors that Trac9 monitors include Commitment to Sobriety, Quality of Life in Addiction Recovery, Optimism, and Spirituality. **The higher a patient scores on these factors, the more likely they are to achieve long-term, sustained recovery**. While programs want to see a reduction in pathologies, they also want to see an increase in resilience over the course of treatment. Patients need both for the greatest chance of success.

Technology that monitors patient progress through nine factors:



We will explore these factors in-depth in the section on how tracking these outcomes improves patient outcomes.

Applying Knowledge of Predictive Pathologies

Throughout our experience working with programs across the country, as well as in-depth analysis of the research, we see the five pathologies incorporated into our tracking software to have the highest degree of predictability related to patient progress in recovery.

By measuring the five pathologies, our software informs clinicians when the patient not only needs additional support in terms of having someone available to talk to, but also identifying the need for additional training or support around building cognitive behavioral coping skills such as restructuring negative thoughts or dealing with cognitive distortions.

Let's take a look at how identifying pathologies helps clinicians and patients. We'll start with craving.

Verbal and visual craving is a mechanism in the brain formed through standard operant conditioning. A cue has become unconsciously linked to a feeling, thought, or behavior, which sets off craving/ seeking pathways in the brain (Hill-Bowen, et al., 2021). Even if the individual was not thinking about or planning to use, the neural pathways surrounding use are triggered, activated, and then the individual suddenly feels a strong desire for the drug. This is because brain path- ways fire along neural networks. If a cue neuron is triggered by the sight of a spoon, for example, then the entire network related to craving and use also activates.

There are two methods of handling cues. First, the individual can learn to recognize these unconscious cues and avoid them. Perhaps they get rid of triggers within their control. For example, the patient decides to take a different route home that doesn't go past their favorite liquor store, which prevents the neural network from firing in the first place.

However, because these firings trigger unconsciously, simple avoidance is not enough. It's impossible to avoid all cues in one's life, especially if they are as common as a spoon or maybe a favorite chair where they used to sit and do drugs. Sometimes the brain forms very specific associations, but it may also have formed general associations. Rather than sitting down in one's favorite chair being a cue, sitting in general is a cue to fire the existing drug use pathways. Because activities like sitting are obviously unavoidable, the individual also needs coping mechanisms to handle these triggers when they do occur.

In essence, they are creating new neural pathways or networks so that, upon seeing a particular cue, different firing patterns are in place not related to drug use. This is easier said than done as anyone who has ever tried to change bad habits or get into healthier ones knows.

This is why the individual needs to learn to recognize the trigger for use and then manage the craving until it passes. This can be as simple as calling a sponsor or refocusing their attention on a different activity. In a paper published in Biological Psychiatry, the authors conducted a randomized controlled trial (the gold standard of research design) to determine the effects of cue-exposure based extinction training (CET) and found it to be one of the most effective therapeutic interventions currently in use (Chambless and Ollendick 2001).

CET effectively creates a remapping of neurological pathways. In plain speak, the individual is repeatedly exposed to triggers while not using drugs. Over these repeated exposures, the brain eventually starts to de-emphasize the old pathway connections and begins to default to the new association not related to drug use.

Our goal with our outcomes tracking software is to monitor these key pathologies, allowing clinicians who use our software to identify the degree of progress a patient is making along reorienting their brains to a recovery lifestyle. Additionally, they can determine when a patient is at increased risk of craving, use, or AMA.

Building Resiliency for Long-term Success

As William Miller, the founder of Motivational Interviewing, discovered in his own research, the more often a patient verbalizes commitment to recovery in treatment, the more likely they are to be successful in sustaining recovery (Miller, 2014).

Those struggling with addiction also need hope (Optimism) that they can achieve a better life and that their lives have purpose and meaning (Spirituality). Both of these factors are intimately connected to Quality Of Life in Addiction Recovery. As Victor Frankl (1946) made evident in his book "Man's Search for Meaning," humans can put up with the most horrific conditions if they have hope for the future and find meaning in their life. Hope and meaning both create seeking behaviors to continue to improve one's life while increased quality of life also acts as a reward mechanism to encourage further progress.

Patients who can reduce their pathologies through cognitive behavioral strategies, and can build recovery capital in the form of resilient behaviors, have the highest probability of long-term positive outcomes.



Trac9's software has helped organizations reduce the rate of their AMAs by as much as 36%

This reorientation to new thought patterns, behaviors, and activities is closely related to our discussion around creating new neural pathways and networks. Humans are somewhat unique in that we use our prefrontal cortex for long range planning and can prioritize long-term over short-term gain (often referred to as "delayed gratification"). We can see this in our everyday lives when we invest tens of thousands of dollars now in order to get a university degree that leads to a better life years from now or when we invest money now in order to save for retirement decades later.

Spirituality and Quality of Life are two, central long-term goals that individuals in recovery can orient themselves towards. And, to be clear, Spirituality is highly generalized as a greater sense of purpose, not necessarily related to any particular religious tradition.

Optimism and Commitment to Sobriety are **leading indicators** that the individual truly believes they can achieve a better life. If they don't believe it's possible, then they won't make the effort to delay gratification for higher-order goals. Tracking these leading indicators provide additional information to clinicians about potential for AMA since individuals who aren't committed to recovery are, obviously, unlikely to want to complete the program.

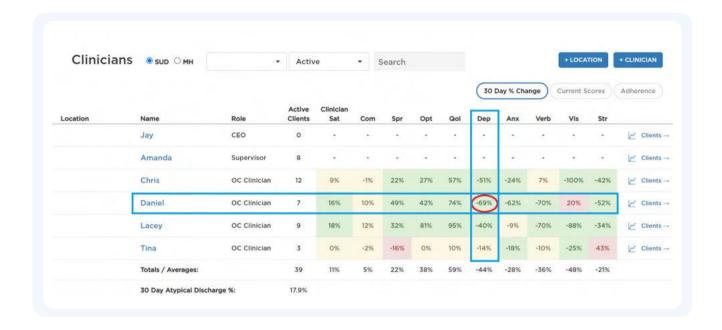
Both the leading indicators and long-term goals of Spirituality and Quality of Life are critical to longterm success in recovery. For programs that are looking to improve patient outcomes, the patient's progress along resiliency factors will help tell you if they have an increased or decreased chance of relapse. This is not only important for patient satisfaction, but also for analyzing risk when negotiating value-based care contracts. In order to reduce the likelihood of relapse, focusing on resiliency factors is instrumental in helping your program predict potential down-line risk and costs.

How Does Tracking Outcomes Help Patients?

Keeping Patients in Treatment

We all know that, for treatment to be effective, a patient must actually stay in treatment and remain actively engaged in the process. **Study** after **study** has shown that the longer a patient is connected to care, the higher their likelihood of sustaining recovery (Scott, et al., 2011). For this reason, keeping patients in treatment and avoiding AMAs is critical to the improvement of program effectiveness.

Our data suggest that 17% of all patients at any given recovery center will eventually leave treatment against medical advice. This can be absolutely detrimental to a patient's recovery and overall health. Of course, for some patients, leaving against medical advice can be deadly (Ahmad, et al., 2021).



Our proprietary algorithm helps facilities identify patients who are most likely to leave early against medical advice (AMA). **Trac9's software has helped organizations reduce the rate of their AMAs by as much as 36%.** That's 36% more people receiving the full treatment they need to reclaim their lives from their battle with substance use disorder. By staying in treatment longer, patients undoubtedly make their full recovery more likely.

Trac9 helps identify strengths within each program through patient, facility, and national average analytics. **This allows patient care to be individualized and tailored to the patients' needs through- out treatment.** By allowing organizations to effectively take a data-informed approach to individualized treatment, Trac9 creates better outcomes for patients.

By improving the data providers collect in terms of clinical efficacy, their clinicians will be better equipped to recognize what is most beneficial to a patient's recovery. As we'll discuss shortly in more detail, **this enables clinicians to improve their ability to help patients.**

In addition, this will help individual programs, and entire facilities, to develop a data-informed set of best practices. **Over time, this can drastically improve AMA rates and patient outcomes.** This is good for patients, for they may be more likely to return to a specific provider if they need additional treatment, or even recommend the program to others.

We have numerous companies that have successfully renegotiated higher rates based on their performance. Want to speak with them directly?

Contact us and we will put you in touch with actual facilities using Trac9.



How Does Tracking Outcomes Help My Facility?

At its most basic, **improved outcomes mean healthier patients**, which leads to a better reputation, better word-of-mouth in the community, and more referrals. Positive clinical outcomes lead to a positive reputation for efficacy which, in turn, leads to organizational growth, all in a virtuous cycle. Improved outcomes also often lead to higher rates of reimbursement from insurance payers. **When insurance agencies see better results, they are willing to reimburse for services at higher rates.** Moreover, since the proprietary algorithms embedded in our software are able to provide predictive analytics around potential patient relapse, determining down-line risk in valuebased care contract negotiations becomes highly advantageous. Not only can providers negotiate higher rates, but they can also mitigate costs by refocusing efforts on patients evidencing higher probabilities of negative outcomes.

For those who are not yet familiar with value-based care, it is a contractual model where payers provide a fixed reimbursement to the provider for a specified period of time. For example, the payer may provide \$30,000 to cover a year of treatment. This is advantageous to the provider if the individual only goes through a single round of treatment, but is disadvantageous if the patient has to come back multiple times, incurring additional costs for no additional reimbursement. Valuebased care contracts shift risk so that providers are encouraged to both take on additional downline risk as well as encouraged to improve the quality of interventions to reduce said risk.

Payers prefer these kinds of contracts because it also limits their own risk. Relapse is often a part of many individuals' recovery journey, so if a payer knows they will not have to pay high detox or residential treatment fees more than once over a 12-month period, they are willing to provide a higher reimbursement.

Outside of value-based care contracts, most payers are also willing to provide higher reimbursement to any provider that can deliver quantifiably higher outcomes. This is because improvements in a patient's mental health often significantly reduce physical healthcare costs, some- thing the payers are acutely aware of. While payers don't enjoy paying \$15,000 for a round of residential treatment, they really don't like paying \$16,000 a year for someone with Type 2 Diabetes or \$30,000 for an ER visit after a drunk driving accident.

As most providers do not have the ability to present patient outcome data to the payers, and because the payers know the simple act of measuring outcomes improves them, bringing patient outcomes data to the table in payer negotiations sets programs apart from those that don't and becomes a distinct strategic advantage.

How Does Tracking Help Therapists Improve Their Work?

Identification, Early Intervention, and Individualizing Patient Programs Through Outcomes Tracking

To put it simply, **you can't improve what you can't track**. By taking a data-informed (sometimes called measurement-based or feedback-informed) approach to care, therapists have real, concrete evidence that what they are doing is working, or conversely, that it isn't working **(Lambert, 2010)**. Either way, this allows them to make data-driven decisions regarding patient care and individualized treatment plans.

Trac9 provides evidentiary support to address specific needs in treatment. "You can say, 'you've been at 100% commitment to sobriety for the past several weeks but currently you are at 80%. Are you thinking of drinking or using a different type of drug?" said Dr. Dempsey, Chief Science Officer for Trac9. "It gives you an opening into potential issues that are occurring with your patients that they otherwise wouldn't disclose."

Additionally, Trac9 doesn't just tell providers whether or not what they have done in the past works. **Trac9's software can also use data to create predictive analytics for the entire organization**. This means providers can account for factors that impact individual patients, like age, gender, and drug of choice. The software will give suggestions as to the form of treatment that is most likely to be successful for the individual patient **specifically at their facility**.

"Trac9 provides a science-based, visual representation of how patients are improving over time," said Dr. Wilkes. "This helps clinicians track progress and also helps identify areas of growth in their patients."

Level Of Care	Assessment	Completed on		Total Scores		Resilience Scores			Pathology Scores						
				GRS	Resil	Path	Com	Spr	Opt	Qol	Depr	Anx	Verb	Vis	Str
ОР	05/05/2022	05/11/2022	Std Conv	N/A 85	N/A 85	N/A 14	30 100	24 50	23 96	19 94	3 5	37 33	26 14	0	8 20
Residential	04/28/2022	04/28/2022	Std Conv	N/A 87	N/A 91	N/A 16	30 100	35 73	23 96	19 94	4 7	40 38	27 15	0	9 23
Residential	04/21/2022	04/21/2022	Std Conv	N/A 87	N/A 89	N/A 15	30 100	39 81	19 79	19 94	2 3	40 38	27 15	0	8 20
Residential	04/14/2022	04/14/2022	Std Conv	N/A 88	N/A 94	N/A 17	30 100	39 81	24 100	19 94	4 7	40 38	32 21	0	8 20
Residential	04/07/2022	04/07/2022	Std Conv	N/A 87	N/A 93	N/A 19	30 100	41 85	22 92	19 94	7 12	41 39	29 18	0	10 25
Detox	03/31/2022	03/31/2022	Std Conv	N/A 70	N/A 75	N/A 34	30 100	14 29	21 88	17 83	11 18	55 61	41 32	N/A	10 25
Detox	03/24/2022	03/24/2022	Std Conv	N/A 59	N/A 68	N/A 50	30 100	4 8	21 88	16 78	17 28	55 61	74 71	N/A	16 40

Data from Trac9 also suggests that therapists who actively look at this data and incorporate it into their treatment see more successful patients. **Therapists who do not look at the weekly data have patients who are 13% more likely to fail treatment**. If the therapist once again doesn't look at that data after the second week, their patients are as much as 32% more likely to fail treatment compared to those who do look at it! "We really encourage clinicians to monitor their patients' data closely," said Dr. Wilkes. "Therapists should be looking at this data at least weekly and before every individual session with a patient."

This data also allows facility leadership to assess the strengths and weaknesses of their individual clinicians, aiding leadership in deciding what kind of in-house training might be helpful for their staff. This also means that it is easier to match patients to an appropriate therapist based on the strengths of the therapist and the needs of the patient.

180,000 patients later, we're pleased to add our own findings to the growing body of evidence-based practice

When therapists are doing their best work, it is not just the patients who benefit, but the therapists as well. Every provider has come to realize that true quality care comes from great therapists, which are hard to find and often even harder to retain. A race to the top in terms of compensation and benefits is a losing game that many providers can't even play, so other attraction and retention strategies are needed.

Increased productivity and success lead to greater job satisfaction when clinicians see their own professional growth and positive patient outcomes. Therapists that see improved treatment outcomes and improved morale are often able to treat more patients and do so more effectively, which also greatly aids in clinician attraction and retention.

How Trac9 Does Tracking

As discussed earlier, Trac9 tracks 5 pathology factors, including Depression, Anxiety, Stress, and Craving as it relates to verbal as well as visual cues. It also measures 4 resilience factors, including Commitment to Sobriety, Quality of Life in Addiction Recovery, Optimism, and Spirituality. These factors have been carefully chosen based on research that demonstrates these factors are strong indicators of someone's likelihood to successfully complete treatment. Unlike many therapeutic interventions that rely on theory alone, the variables monitored by Trac9 were chosen based on concrete research data rather than theory (Chambless & Ollendick, 2001; Loeber, et al., 2006; Panlilio, et al., 2021). 60,000 patients later, we're pleased to add our own findings to the growing body of evidence-based practice. This data is collected via assessments taken by patients. At intake, a patient will take an intake assessment through our web-based platform. Patients then take their first weekly assessment, which takes about 13 minutes to complete. Patients take weekly assessments every week throughout the course of care. Then, for a year after treatment has ended, patients will complete a monthly assessment that takes less than 5 minutes to complete.

The data that is collected is instantly plotted on a graph after every assessment so that it is easy to view trends over time. It allows for a standardized process that collects data in a rigorous way so that clinicians can identify and evaluate their patients' progress over time.

Trac9 has the largest database in the healthcare industry dedicated to providing an industrywide, scientifically verified, and comprehensive benchmark. For this, Trac9 uses a proprietary and aggregated score based upon the evaluation of numerous factors, the combined clinical experience of everyone involved, and years of data mining. It has successfully been used to help patients representing all levels of care throughout the United States.

Our customers are able to leverage this data to help further their goals of maximizing patient recovery and long-term wellness.

"Executives and facility leaders love this feature," Dr. Wilkes said. "They love being able to see how they are doing compared to the national average. It shows them what they have accomplished and what they have to work on." The fact that Trac9 follows up with patients for an entire year after they have completed treatment is also extremely important.

Based on peer-reviewed research and our own data, 12 months is the primary benchmark at which we can establish that a patient's recovery has become "sticky," meaning that they are likely able to sustain it. Ongoing data collection after the completion of treatment allows facilities to really understand how well their patients are doing, not just while in treatment, but after discharge as well.

"This is where we really see the outcome," said Dr. Wilkes. "It can be a bit of a shock for some centers at first. Many providers often don't have a strong grasp on their actual success rates and some find them to be much weaker than they'd previously assumed." That initial shock is often transformative for facilities as it realigns the entire organization around the value of outcomes tracking. The team begins to look at current treatment protocols from top to bottom in order to identify what's working and what's not. The great thing for those using Trac9 is that they can now actually test different methods to see which ones actually work.

Contact Trac9 Today

Trac9 allows facilities to see how their patients are improving and struggling in real-time. **It gives therapists the tools they need to see what is working for individual patients**, as well as insights into their own professional strengths and weaknesses.

And Trac9 doesn't just give you information on individual patients — it also allows you to see how you are doing as a facility and compare your facility with others on a national scale.

With Trac9, the ability to track clinical outcomes will change the future of the behavioral health field.

Trac9 is ready to start helping you improve your patients' outcomes today. Learn more about how to track your patients' progress. Call us now at 1 (833) 998-7229.



Call us now at 1 (833) 998-7229

References

Ahmad FB, Rossen LM, Sutton P. (2021). Provisional drug overdose death counts. National Center for Health Statistics. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm#references

Beck, A.T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Lambert, M. J. (2010). Summary, implications, and future directions. In Prevention of Treatment Failure: The Use of Measuring, Monitoring, and Feedback in Clinical Practice. (pp. 243–257). American Psychological Association. https://www.apa.org/pubs/books/4317225

Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: controversies and evidence. Annual Review of Psychology, 52, 685–716. https://doi.org/10.1146/annurev.psych.52.1.685

Dugas, M. J., Ladouceur, R., Léger, E., Freeston, M. H., Langolis, F., Provencher, M. D., & Boisvert, J.-M. (2003). Group cognitive-behavioral therapy for generalized anxiety disorder: Treatment outcome and long-term follow-up. Journal of Consulting and Clinical Psychology, 71(4), 821–825. https://doi.org/10.1037/0022-006x.71.4.821

Frankl, V. (1946). Man's Search of Meaning. Boston, MA, Beacon Press.

Hill-Bowen, Riedel, M. C., Poudel, R., Salo, T., Flannery, J. S., Camilleri, J. A., Eickhoff, S. B., Laird, A. R., & Sutherland, M. T. (2021). The cue-reactivity paradigm: An ensemble of networks driving attention and cognition when viewing drug and natural reward-related stimuli. Neuroscience and Biobehavioral Reviews, 130, 201–213. https://doi.org/10.1016/j. neubiorev.2021.08.010

Lambert, M. J. (2010). Summary, implications, and future directions. In Prevention of treatment failure: The use of measuring, monitoring, and feedback in clinical practice. (pp. 243–257). American Psychological Association. https://doi-org.lib-e2.lib.ttu.edu/10.1037/12141-009

Loeber, S., Croissant, B., Heinz, A., Mann, K., & Flor, H. (2006). Cue exposure in the treatment of alcohol dependence: effects on drinking outcome, craving and self-efficacy. The British Journal of Clinical Psychology, 45(Pt 4), 515–529. https://doi.org/10.1348/014466505X82586

Lyon, A. R., Dorsey, S., Pullmann, M., Silbaugh-Cowdin, J., & Berliner, L. (2015). Clinician use of standardized assessments following a common elements psychotherapy training and consultation program. Administration and Policy in Mental Health, 42(1), 47–60. https://doi.org/10.1007/s10488-014-0543-7

Panlilio, L.V., Stull, S.W., Bertz, J.W., Burgess-Hull, A.J., Lanza, S.T., Curtis, B.L., Phillips, K.A., Epstein, D.H. (2021). Beyond abstinence and relapse II: momentary relationships between stress, craving, and lapse within clusters of patients with similar patterns of drug use. Psychopharmacology, 238, 1513–1529. https://doi.org/10.1007/s00213-021-05782-2

RAND Corporation. (2022, May 3rd). 36-Item Short Form Survey (SF-36). RAND Health Care. https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form.html

Ruggiero, K. J., Del Ben, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD Checklist-Civilian Version. Journal of Traumatic Stress, 16(5), 495–502. https://doi.org/10.1023/A:1025714729117

Scott, C. K., Dennis, M. L., Laudet, A., Funk, R. R., & Simeone, R. S. (2011). Surviving Drug Addiction: The Effect of Treatment and Abstinence on Mortality. American Journal of Public Health, 101(4), 737–744. https://doi.org/10.2105/ajph.2010.197038

Somoza, E., Dyrenforth, S., Goldsmith, J., Mezinskis, J., & Cohen, M. (1995, May 25). In search of a universal drug craving scale [Paper presentation]. Annual Meeting of the American Psychiatric Association, Miami, Florida.

Zimmerman, M., Chelminski, I., McGlinchey, J. B., & Posternak, M. A. (2008). A clinically useful depression outcome scale. Comprehensive Psychiatry, 49(2), 131–140. https://doi.org/10.1016/j.comppsych.2007.10.006



1 (833) 998-7229

www.trac9.com