

CE Corner

Recent progress in treating panic disorder

BY STEPHANIE PAPPAS

BONNIE ZUCKER, PhD, a clinical psychologist in Los Angeles, was in graduate school studying treatments for panic disorder in 2001 when she got hit by a tsunami of stress: her dissertation work, the terrorist attacks in New York, where she previously lived, and a tense dinner party where the attacks became the subject of conversation.

Sitting at the table, she suddenly felt like she could not breathe. Her heart pounded. She fled to the bathroom, wondering whether she was having a heart attack. And then she realized: She was having a panic attack.

“But because I knew that it was a panic attack, I was able to calm myself down,” Zucker said. “Someone else might have thought, I need to go to the hospital.”

Zucker’s knowledge of panic attacks had saved her from spiraling into panic disorder, a condition in which people experience recurring panic attacks and mounting fear about them. Patients can feel out of control and hopeless, but as Zucker’s experience suggests, panic disorder can be controlled. Research on this condition dating back nearly 50 years has shown that cognitive behavioral therapy (CBT) and some medications such as selective serotonin reuptake inhibitors (SSRIs) can ease panic disorder. Now, more recent work is revealing that even short, intensive CBT can have long-lasting benefits—and spill over to improve people’s mental health more broadly.

“For patients, it’s important to realize that focused treatments like CBT can really have a broad impact on many parts of the mind,” said Jonathan Huppert, PhD, a clinical psychologist and head of the Laboratory for the Treatment and Study of Mental Health and Well Being at the Hebrew

University of Jerusalem whose work focuses on anxiety disorders. “By focusing on thoughts, behaviors, and emotions, it can really change who you are.”

Understanding panic

Panic disorder is defined in the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) by recurrent and

unexpected panic attacks, followed by a month or more of either persistent concern about more attacks or their consequences, or a significant maladaptive behavior change related to the attacks. Panic attacks are sudden surges of intense fear or discomfort that include such symptoms as heart palpitations, nausea, dizziness, and/or feelings of depersonalization (see sidebar page 38 for a full list).

Panic disorder often co-occurs with agoraphobia, in which the person develops a fear of situations or places that are hard to escape or where getting help might be difficult, such as elevators, public transportation, or crowds.

The gold-standard treatment for panic disorder is CBT, which has been shown to be effective both in trials and in clinical care settings (Öst, L., et al., *Clinical Psychology: Science and Practice*, Vol. 30, No. 3, 2023).

While this therapy is a long-standing treatment, clinicians are increasingly refining their understanding of the way people overcome their fears using CBT techniques. Where once it was thought that patients needed to habituate to their feared sensations or stimuli, there is now more focus on inhibitory learning, or replacing the learned fear with new information, even chasing the experience of a panic attack—all the better to learn that

CE CREDITS: 1

Learning objectives

After reading this article, CE candidates will be able to:

- 1 Define panic disorder and list key symptoms of panic attacks.
- 2 Explain why confronting the symptoms of a panic attack is a key part of treatment.
- 3 Discuss potential benefits of cognitive treatments on other psychological processes, such as attachment.

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KEY POINTS

1

Panic disorder is marked by recurring panic attacks as well as ongoing fear of these attacks.

2

Medications and cognitive therapies are the first-line treatments for panic disorder.

3

Cognitive behavioral therapy, the best-studied intervention for panic disorder, can also have downstream effects on psychodynamic processes such as attachment and anxiety sensitivity.

these physical sensations are not catastrophic.

“Exposure itself is insufficient,” said Reid Wilson, PhD, a clinical psychologist and director of the Anxiety Disorders Treatment Center in Chapel Hill, North Carolina, comparing habituating to panic to white-knuckling through a flight for a person with a fear of flying. “We are now looking at this model, which has more to do with distress tolerance: I am willing to experience the symptoms and then handle the symptoms, as opposed to avoiding them.”

Deepening treatment

Psychoeducation can be helpful for people who have had one panic attack and seek help, said Zucker, who has a book on panic disorder coming out with publisher New Harbinger next summer. While working as a graduate student counselor, she saw many students who just needed education on why they might be having panic attacks and why these episodes were

Panic disorder is often comorbid with other anxiety disorders and depression.

not dangerous in order to avoid developing deeper anxiety.

For established panic disorder, structured and collaborative CBT protocols are the go-to, said Kevin Chapman, PhD, a clinical psychologist and the founder and director of the Kentucky Center for Anxiety and Related Disorders in Louisville. These protocols combine psychoeducation and symptom tracking. Therapist and patient work together to catalog feared situations and avoidance behaviors, like refusing to visit the supermarket or always sitting near an exit. This information helps shape the exposure therapy in which patients will learn to tolerate their fears. This approach

typically begins with interoceptive exposure—creating the sensations of a panic attack so that the patient can work on disentangling the bodily sensations from the overwhelming feeling of threat.

“For instance, if they get lightheaded, then we might spin them in the office chair for a minute and then have them stand up quickly,” Wilson said. “We are provoking the sensations, but we’re reducing the threat because they’re in the safety of their relationship with us in our office.”

Then come field trips that take patients into real places they would prefer to avoid. In keeping with the inhibitory learning approach, the





idea is to break the link between the patient's anticipatory dread and the actual outcome. It is also important to move from an attitude of "I have to do this" to "I want to do this," Wilson said.

The goal of CBT is to teach people that it does not matter if they have a panic attack, said Martin Antony, PhD, chair of the Department of Psychology at Toronto Metropolitan University and a specialist in anxiety disorders.

"When people are finally willing to welcome these sensations that they don't like and to say, 'OK, come on panic attack, come get me,' that's when they stop having panic attacks," Antony said.

A typical CBT course for panic disorder might run 9 to 12 weeks, but there are shorter, more intensive options as well. The Bergen 4-Day treatment for panic disorder is a concentrated CBT method developed in Norway that was first used for obsessive-compulsive disorder but has also proven effective for panic. It begins with psychoeducation in a group setting and first focuses on establishing the patient's intentions to lean into their discomfort. On Day 2 of the treatment, the patient chooses an individual plan for exposure tasks and launches into these tasks with the help of a therapist. These tasks are both interoceptive and in vivo, such as going somewhere the person would normally avoid because of agoraphobia. Group sessions throughout Days 2 and 3 allow participants to share their experiences and draw support from fellow patients. On Day 4, patients learn how to continue training and maintain changes in their daily lives, making an exposure plan for the next 3 weeks.

A long-term follow-up on 30 patients who underwent this protocol found that there were significant and continuing decreases in symptoms at 3 months, as measured by the Panic Disorder Severity Scale. At 18 months, these gains were maintained, and 90% of patients were in remission. Though panic was the focus of the intervention, participants also saw reduced depression and generalized anxiety, persisting through 18 months (Eide, T. O., et al., *BMC Psychiatry*, Vol. 25, No. 107, 2025).

Other research also suggests that narrowly focused treatment for panic can have wider effects. Huppert and his colleagues have found that CBT treatment for panic disorder can improve anxious attachment, which

is a relationship style marked by fear of abandonment and a strong need for reassurance, despite attachment not being a focus of treatment (*Psychotherapy Research*, Vol. 29, No. 3, 2019). A follow-up study found a similar improvement in anxious attachment in an asynchronous, internet-based CBT module—in other words, when no human therapist was involved (*Journal of Counseling Psychology*, Vol. 69, No. 2, 2022). This finding suggests that anxious attachment improved not because of a therapeutic relationship but as a direct result of the treatment reducing patients' sensitivity to anxiety. The patients may have relied less on other people to cope with anxiety as their sensitivity to anxiety declined, Huppert said.

In a final study, Huppert and his team randomized 128 participants to single-session CBT, psychodynamic therapy, or a control group, this time focusing on targeting anxiety sensitivity specifically. They found that CBT reduced anxiety sensitivity compared with the control group, while psychodynamic therapy did not. CBT also improved interpretation bias, or the tendency to interpret bodily sensations as catastrophic. Interestingly, Huppert said, those who improved their anxiety sensitivity in the CBT condition also saw an improvement in reflective functioning (*Psychotherapy Research*, 2025).

"One potential interpretation of this is that when one is doing good CBT, it affects psychodynamic processes of attachment and reflective functioning as well, even if they're not directly addressed," Huppert said.

The growing understanding of the processes underlying related disorders has led to more interest in transdiagnostic treatment. Panic disorder is

Symptoms of a panic attack

As defined in the *DSM-5*, panic attacks occur suddenly, peak within minutes, and include four or more of the following:

- Palpitations, a pounding heart, or an accelerated heart rate
- Sweating
- Trembling or shaking
- Sensations of shortness of breath or smothering
- Feelings of choking
- Chest pain, discomfort
- Nausea, abdominal distress
- Dizziness, light-headedness, or faintness
- Chills or heat sensations
- Numbness or tingling (paresthesia)
- Feelings of unreality (derealization) or detachment from the self (depersonalization)
- Fear of losing control or “going crazy”
- Fear of dying

often comorbid with other anxiety disorders and depression; a transdiagnostic approach helps the patient learn to regulate their emotions more effectively across the board, rather than sequentially tackling each diagnosis.

“With generalized anxiety disorder, worry is a strategy people use in response to anxiety, just like escape and avoidance is a strategy people use to respond to panic,” Chapman said. “What we say now is, all these symptoms are emotional dysregulation. Let’s teach skills to address that at the core, and then you conclude with exposures.”

Expanding options

While CBT is typically the first-line psychotherapy for panic disorder, SSRIs and serotonin-norepinephrine reuptake inhibitors (SNRIs) are also effective (Chawla, N., et al., *BMJ*, 2022). The research shows that medications work faster than CBT at reducing panic attacks, Wilson said, though CBT is more effective over time. Medications can be used in conjunction with psychotherapy, Wilson added, noting that therapists should be aware of a few concerns. One is that in reducing the panic symptoms, these medications may lessen the opportunities patients have to practice confronting and accepting their feared sensations. That can mean a higher chance of relapsing if the person stops taking the medications. Another concern is that patients who are working on CBT while also using medication may attribute their gains to the medication rather than to their hard work, Wilson said.

“When there is an issue regarding external attribution . . . they have a tendency to attribute it to the medication and not their efforts,” he said, “so there’s a drawback for people with a particular perspective.”

On the other hand, Wilson said, medications can put a damper on symptoms, so patients feel more comfortable starting to confront them. And some patients with panic disorder may reject taking medications because of their worries about possible side effects such as nausea or dizziness, which might mimic their feared panic symptoms. Wilson counsels patients on the pros and cons and works with their preferences.

In addition to the psychological models of panic disorder, biological models suggest that for some people, panic may arise because of oversensitivity to feelings of suffocation.

These people overreact to the buildup of carbon dioxide in the blood, which triggers the urge to breathe faster and more deeply. Ironically, however, overbreathing can cause the body to take in more oxygen than it needs while not clearing enough carbon dioxide. This can lead to a cycle of feeling even shorter of breath.

“It sets a brittle balance, a brittle homeostasis, that can be tripped into full-bore panic,” said Robert Cuyler, PhD, the chief clinical officer at Freespira Inc., a company that offers a capnometry-guided respiratory intervention (CGRI). For 4 weeks, patients spend about 20 minutes twice a day breathing into a capnometer, a medical device that measures the concentration of carbon dioxide in a patient’s exhalations. The device translates the measurements into visual and audio instructions on how to inhale and exhale to keep oxygen and carbon dioxide in a normal range.

CGRI is based on capnometry-assisted respiratory training (CART), an FDA-approved therapy developed by Alicia Meuret, PhD, a professor of psychology and director of the Anxiety and Depression Research Center at Southern Methodist University and chair of the scientific council and board of directors at the Anxiety and Depression Association of America. (Meuret is not involved with Freespira Inc.)

Breathing and biofeedback have a long history of controversy in panic disorder treatment, Meuret said. In the early 2000s, teaching breathing techniques in CBT fell out of favor over concerns that breathing would dampen the physical symptoms that patients needed to confront. There were also concerns that breathing might become a safety behavior, or a crutch, to which patients attributed their success, rather than seeing

themselves as in control during a panic episode. (Today, some therapists use breathing techniques in CBT, while others downplay them.)

The problem, Meuret said, is that traditional breathing techniques can be counterproductive for people with panic disorder precisely because these techniques might cause them to overbreathe. When people breathe more slowly, she said, they compensate by taking in a larger volume of air. “Instead of breathing at a normal volume, they double or triple their volume, which basically would be as if they’re tripling their respiratory rate,” she said. CART can help patients normalize their breathing and reduce panic symptoms by

correcting lower-than-normal levels of carbon dioxide and feelings of shortness of breath, Meuret and other researchers have found (*Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, Vol. 3, No. 6, 2018; Kim, S., et al., *Journal of Clinical Psychiatry*, Vol. 73, No. 7, 2012).

Moving forward, there may be ways to tailor treatments or to determine which people will respond best to each treatment, Antony said. Newer research is also working on understanding the relationships among these disorders, their treatments, and underlying psychodynamic processes, Huppert said.

“We’re starting to switch over from looking at CBT directly for panic or

anxiety sensitivity and using unified protocols to see how wide this impact is on some of these processes, including things like attachment and reflective functioning,” he said. “You don’t always need to be doing psychodynamic techniques in order to facilitate psychodynamic processes.” ■

RESOURCES

What to do when you panic: A kid’s guide to transforming panic into personal power

Glassman, L.
Magination Press, 2025

Reducing distress and avoidance through exposure- based interventions

Farmer, R. F., & Chapman, A. L.
In *Behavioral Interventions in
Cognitive Behavior Therapy:
Practical Guidance for Putting
Theory into Action* (3rd ed.)
APA, 2025

Panic disorder and agoraphobia

Craske, M. G., et al.
In Barlow, D. H. (Ed.), *Clinical
Handbook of Psychological
Disorders: A Step-by-Step
Treatment Manual* (6th ed.)
Guilford Press, 2021

Mastery of your anxiety and panic: Workbook (5th ed.)

Barlow, D. H., & Craske, M. G.
Oxford Academic, 2022



Cognitive behavioral therapy (CBT) is typically the first-line psychotherapy for panic disorder. Recent work is revealing that even short, intensive CBT can have long-lasting benefits—and spill over to improve people’s mental health more broadly.

Enhancing Learning through Commitment to Change

Greg J. Neimeyer, Ph.D.

The rapid proliferation of new knowledge in psychology has placed renewed demands on professional practitioners to keep pace with ongoing advances. Overall, knowledge may remain current in professional psychology for as little as about 6-7 years, with more rapidly diminishing durability in key areas of practice, such as psychopharmacology, child health, forensics, substance use, or neuropsychology, among others (Neimeyer, Taylor & Rozensky, 2014). This means that, in the absence of a commitment to ongoing professional development, many practitioners may begin to experience knowledge obsolescence even while they are still in the early stages of their career (Neimeyer, Taylor & Rozensky, 2012).

BEST PRACTICES

In response, the field of professional psychology, together with other allied health professions, have redoubled their efforts to formulate sets of “best practices” that can enhance learning and the translation of that learning into practice (Institute on Medicine, 2010; Taylor and Neimeyer, 2017). The collective objective of these best practices is to enhance the comprehension, retention, and application of new knowledge in support of ongoing professional competence. Some of these practices focus on the value of adapting the learning strategies to individuals’ unique learning styles, presenting information multiple times utilizing different media, and providing opportunities for individuals’ input, application and behavioral rehearsal of the material, in addition to receiving peer, or instructor, review and feedback (Neimeyer & Taylor, 2014; Taylor and Neimeyer, 2017).

In addition to identifying current best practices, the allied health fields have long dedicated themselves to the development and evaluation of novel mechanisms for enhancing new learning, as well, drawing from a wide range of literatures with common objectives. Research within the science-of-learning, adult education, and performance enhancement literatures have been particularly productive in identifying and assessing novel methods of learning and facilitating the translation of that learning into

practice. *Benchmarking* and *self-assessment* are two examples of educational practices that have arisen as mechanisms designed to facilitate quality assurance and ongoing professional development (Neimeyer and Taylor, 2014).

Benchmarking and Self-Assessment. *Benchmarking* refers to the express comparison of one’s own work with the work of other professionals in the field. Benchmarking can be understood as the systematic process of evaluating work based on best practices and using evidence-based practice (EBP) to improve performance. In a typical benchmarking procedure, a psychologist might be given videotapes of peers who are conducting a procedure, such as a substance use screening. The videos are pre-determined to depict varying levels of quality. They might range from depicting relatively poor, informal questioning through more thorough, systematic, structured interviews. The psychologist is then asked to evaluate his or her screenings in relation to those he or she has seen, and given information about key components that are present, and absent, in each of the video “benchmarks.” Benchmarking provides an anchor against which psychologists can compare themselves, increasing the accuracy of their self-assessment and incorporating elements of the “higher” benchmarks into their own practice.

Research has demonstrated the effectiveness of benchmarking in relation to improving the accuracy of self-assessment, which is a critical pre-condition for evaluating current clinical skills and needs. Lane and Gottlieb (2004), for example, found that when medical residents viewed videotapes of their performance, their self-assessment accuracy increased significantly. And their accuracy increased still more when they watched the videos with a faculty member. Similarly, Martin et al., (1998) found that comparing one's own performance to the performance of others increased the accuracy of self-assessment. In their study, these researchers invited family practice residents to conduct mock interviews with a mother suspected of physically abusing her child. The residents were then asked to rate their performance. Next, residents watched their videotaped interview, in addition to watching four benchmark interviews depicting varying levels of competence. After watching the benchmark interviews, the relationship between the residents' self-ratings and the independent ratings of the supervisor was significantly stronger.

Self-assessment can take many different forms. All forms share in common express efforts to reflect upon, and evaluate, one's own current skills and/or future professional needs and interests. The Quality Assurance Program in Ontario, Canada, is one example of a well-articulated program of self-assessment (Morris, 2011). The Quality Assurance Program requires that each psychologist undertakes a self-review every other year, though the completion of a stipulated Self-Assessment Guide and a Continuing Professional Development Plan. Through a series of questions, psychologists critically evaluate their strengths, growth areas, and gaps in their learning. After conducting the self-assessment, they develop their own personal plan to remediate areas of identified weakness and to enhance their overall professional competence, sharing their plans with a colleague who reviews it and provides

input. The Continuing Professional Development Plan is designed to 1) promote continuing competence and quality improvement, 2) remedy gaps in knowledge and skills identified in the self-assessments, 3) address changes in practice environments and workplace needs, and 4) incorporate evolving standards of practice and advances in technology. These Continuing Professional Development Plans are subject to peer review by members of the College of Psychology of Ontario according to stipulated regulatory requirements.

Both benchmarking and self-assessment reflect the considerable effort that can accompany efforts designed to promote professional growth and development. Facilitating new learning, and the translation of that knowledge or skill into practice can be an effortful process, requiring reflection, formulation and deliberate application. Transitioning new learning to practice often requires an individual to reflect on how new knowledge or skills may apply to their own experience and to formulate ways in which the new material can be modified, adapted, or utilized within their own professional contexts or workplace environments. If the value of this effort is justified by the anticipated improvement or outcomes that may follow from it, then individuals are more prone to commit themselves to changes in what they do, or how they go about doing it.

Although some mechanisms for triggering change are designed to be intensive and may require considerable time, others are designed as brief reflective exercises that can occur immediately after, or even during, a learning event. A longstanding literature on the concept of a Commitment to Change illustrates the value of utilizing this simple technique in the service of generating greater learning and the translation of that learning into actual practice (Mazmanian & Mazmanian, 1999).

COMMITMENTS TO CHANGE (CTCS)

CTCs have been the subject of attention for the last few decades, but only recently have they been imported into the fields of allied health, or more recently still within psychology. CTCs are generally generated following an educational event such as attending a lecture, participating in a workshop, or reading an article (Wakefield, 2004). To complete a CTC, participants are asked to identify a set of possible changes they would like to make in their own practice based on the educational event. They are asked to formulate these changes in specific, behavioral form, which requires them to reflect on the relevance and applicability of the new information, and to adapt its application to their own interests and experience. They are then asked to indicate a level of commitment to each of the changes they have formulated, utilizing a rating scale that reflects their commitment to change, from low (1) to high (5). In the Commitment to Change procedure, participants are often reminded of their commitments 1-2 months

later, and asked to indicate if they actually enacted, or attempted to enact, each of their stipulated CTCs and to describe their experience or outcomes.

The effectiveness of the CTC procedure seems to be related to its three steps. The timing of the administration, immediately after the learning event, provides the participant an opportunity to reflect on the most salient elements of the material and to formulate it in terms that are most relevant to their own experience, interests, or needs. Rating the level of commitment provides a concrete mechanism for reflecting on the importance or value of the change, and anchors the individual in a level of expectation about completing it. And the subsequent follow-up provides a sense of accountability and the opportunity to reflect on the translation of the material into practice, or the barriers that may have impeded or prevented that translation.

THE BACKGROUND ON CTCs

CTCs have been the subject of attention in relation to the organizational change literature for several decades, as a tool for facilitating critical shifts in organizational structure, processes or style. Within the allied health literatures, medicine was among the first to explore the utility of CTCs as a mechanism for facilitating the translation of new knowledge into actual clinical practice. Within this literature, the actual performance of CTCs varies widely, from 47-87% (Wakefield, 2004), based on a number of identified factors. These factors include the extent to which individuals feel as if the CTCs are relatively easy to do, and the extent to which they feel as though they have personal control over completing them (Fidler et al., 1999, Lockyer et al., 2001). The greater the environmental or institutional constraints, the less likely individuals are to be able to follow through on their commitments and accomplish the behavioral changes they have formulated (Parochka and Paprockas, 2001). A number of studies have demonstrated that the CTC procedure can trigger actual changes in practice-related behavior, including the specific prescriptions that physicians write following educational programs (Wakefield et al., 2003), and the specific interventions utilized by occupational therapists over the course of their work with their clients (Lowe, Rappolt, Jaglal, & Macdonald, 2007).

The precise mechanisms involved in triggering this translation into practice are not fully known, but recent work has begun to address them. Herbert, Lowe and Rappolt (cited in Lowe, Hebert & Rappolt, 2009), for example, wondered whether reflection alone at the end of a new learning experience was sufficient to promote practice change, or whether the express formulation of a commitment of change was an essential element. Reflection has long been a key component of ongoing professional development programs, as reflected in the Mann et al., (2009) systematic review of reflection within continuing medication education courses. In their study, Hebert et al. (2009) asked half of their participants to complete CTCs while the other half

were prompted to reflect on the workshop using the Critical Incident Questionnaire (CIQ). Two months following the workshop, there was a modest difference favoring the CTC group over the reflection-only group. The percentage of those who demonstrated significant change was significant in both groups, but it favored those who had formulated specific commitments to change. Overall, 67% of the individuals who used CTCs made changes in practice, compared to 50% of those in the CIQ group who reported doing likewise.

A recent study of the relationship between reflection and behavior change in continuing medical education provides further evidence in this regard (Ratelle, et al., 2017). In a cohort study of attendees at a national hospital continuing medical education course, 223 participants provided reflection scores for each presentation they attended, and formulated commitment-to-change statements at the conclusion of each course. Reflection scores consisted of ratings, on a 5-point scale, about the extent to which the presentation had prompted reflection, re-consideration, deliberation or critical re-evaluation of their practices. A 3-month post-course survey was conducted to determine whether planned CTCs were successfully implemented, and whether they were related to higher levels of reflection.

Overall, participants indicated that 65.5% of the CTC statements were implemented. Reflection scores correlated significantly with the number of planned CTC statements ($r=.65$, $p<.01$), suggesting the potential role of the CTC procedure in enhancing reflection and, potentially, translation into actual practice. In addition, higher reflection scores were related to the greater availability of opportunities for audience response and the use of clinical case illustrations. The researchers concluded that, “we found that reflection strongly correlates with CTC” and that “continuing education “curricula that stimulate reflections may actually promote positive patient care behaviors” (Ratelle et al., 2017, p. 166).

SUMMARY

Educators or learners who are interested in enhancing learning, and the translation of that learning into practice, may increase the retention and translation of material by incorporating CTCs into their programs. Although the overall effectiveness of CTCs as a tool to enhance the integration of new learning into practice is still under study, the current evidence is promising. The incorporation of simple reflective questions into a learning experience may itself be useful, as when the psychologist asks, “How can I use this new knowledge?”, “How does this apply to my practice and to what I do?”, or “What might I do differently based on what I have learned today?” Although simple reflection itself appears to facilitate both learning and the translation of that learning into practice, the express formulation of potential changes and a commitment to those changes may add further value (Lowe et al., 2009). Overall,

the formulation of CTCs represents a relatively simple mechanism for promoting reflection, anchoring expectations regarding adoption, and leveraging new learning into novel practice behaviors. Simple extensions to the CTC procedure that may provide additional benefit include conducting surveys of post-course behaviors to assess compliance with the CTCs, encouraging reports to colleagues or other peers regarding CTCs in order to build in additional elements of accountability, or establishing timelines for the completion of CTCs. With continued utilization and examination, Commitment-to-Change procedures may join the ranks of other processes, procedures and techniques that jointly constitute what has increasingly come to be recognized as the set of “Best Practices” in the field of ongoing professional education and continuing professional competence.

ABOUT THE AUTHOR

Greg J. Neimeyer, Ph.D. is professor emeritus at the University of Florida in Gainesville, Florida, where he has served as the Director of Training and Graduate Coordinator, while practicing in the Family Practice Medical Residency Training Program in the Department of Community Health and Family Medicine. Past Chair of the Executive Board in the Council of Counseling Psychology Training Programs in the United States, Dr. Neimeyer's research has focused on aspects of ongoing professional development and lifelong learning. A recipient of the American Psychological Association's Award for Outstanding Research in Career and Personality Research, Dr. Neimeyer has also been inducted into the Academy of Distinguished Teaching Scholars. He currently serves as the Director of the Office of Continuing Education and the Center for Learning and Career Development at the American Psychological Association in Washington, D.C.

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