

CE

CONTINUING EDUCATION WORKING WITH PATIENTS WITH WEIGHT-ASSOCIATED DISEASES

BY BARBARA MANTEL

There is considerable need for effective mental health treatment for patients with weight-associated health conditions. One in every 10 people in the United States has diabetes, for example, and they are 2 to 3 times more likely to have depression than people without the disease. One in 20 adults has coronary artery disease, and those suffering from heart failure, stroke, or a heart attack are at risk for depression, anxiety, and post-traumatic stress disorder (PTSD), according to the U.S. Centers for Disease Control and Prevention (CDC). And according to the CDC, having poor mental health can make it difficult for patients with these diseases to follow their medical treatment plans, which many times include losing weight as a cornerstone.

CE credits: 1

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

1. Understand how a “weight-loss-first” approach impacts health and impedes mental well-being.
2. Describe the scientific evidence of the genetic and physiological factors that govern body weight.
3. Identify the best evidence-based treatments for treating patients with weight-related issues.

For more information on earning CE credit for this article, go to www.apa.org/ed/ce/resources/ce-corner.

Psychologists often use such interventions as cognitive behavioral therapy (CBT) and psychoeducation to treat higher-weight patients struggling with chronic disease. The emphasis is on goal setting and problem-solving to lose pounds (Levinson, C. A., et al., *The Behavior Therapist*, Vol. 46, No. 7, 2023).

Some patients will succeed with CBT and psychoeducation, but many do not: In randomized controlled studies, dieters did not lose significantly more weight than controls, and in prospective diet studies without controls, up to two thirds of dieters ended up weighing more than when they started (Hunger, J. M., et al., *Social Issues and Policy Review*, Vol. 14, No. 1, 2020).

“One major problem with recommending weight loss for clients is that weight-loss interventions are ineffective,” said Margit Berman, PhD, an associate professor of clinical psychology at Augsburg University in Minneapolis. “A second problem is that weight-loss efforts are not neutral or free of risk.” They can lead to yo-yo dieting and a sense of failure and raise the risk of physical and mental health problems, she said (Markowitz, S., et al., *Clinical Psychology: Science and Practice*, Vol. 15, No. 1, 2008; Kim, M. K., et al., *Circulation*, Vol. 138, No. 23, 2018).

As a result, Berman and other psychologists who are experienced in working with this population are advocating for a different approach.

There is some evidence that a non-dieting, weight-acceptance approach is effective at improving mental health and empowering

patients to advocate for themselves in a world that stigmatizes weight (Dugmore, J. A., et al., *Nutrition Reviews*, Vol. 78, No. 1, 2020).

Helping patients out of the negative cycle of ineffective dieting does not mean embracing the anti-diet messaging of some large beverage, food, and supplement companies that encourages the unfettered consumption of their processed products. Practitioners should counsel patients to be wary of such messaging, especially from online influencers who are paid to promote these companies’ goods.

WEIGHT AND STIGMA

The World Health Organization (WHO) defines obesity—a term that proponents of body positivity say pathologizes fat people—as “abnormal or excessive fat accumulation that presents a risk to health.” Its prevalence has increased globally since the 1970s, according to the WHO. The *National Health and Nutrition Examination Survey* estimates that 42.5% of U.S. adults now have obesity, with the lowest prevalence among non-Hispanic Asian adults (17.4%) and the highest percentages among non-Hispanic White (42.2%), Hispanic (44.8%), and non-Hispanic Black adults (49.6%).

“There are a number of factors that go into the development of obesity,” said Tiffany Powell-Wiley, MD, MPH, an investigator with a joint appointment at the National Heart, Lung, and Blood Institute and the National Institute on Minority Health and Health Disparities. They include biology and genetics as well as social

determinants of health such as access to healthy foods, opportunities for physical activity, exposure to racism, and income and job opportunities, said Powell-Wiley (*Progress in Cardiovascular Diseases*, Vol. 78, 2023).

“When we try to make it as though it’s really about will-power and it’s only about what the patient can do, then we are stigmatizing the patient in some ways,” said Powell-Wiley.

It is important for clinicians to recognize the complexity behind variance in body weight, said Catharine Devlin, PsyD, CEDS-C, a clinical psychologist and a certified eating disorder specialist. “By and large, behaviors account for so little of the variance, and yet we’re making clients feel like it’s their fault” when clinicians unquestioningly advise behavior changes to promote weight loss, said Devlin, the founder of Birch Tree Psychotherapy in Chicago and South Barrington, Illinois.

Patients have likely already suffered adversity because of their weight. In national surveys, the Rudd Center for Food Policy and Health at the University of Connecticut found that 40% of adults with higher weight say they have experienced some form of weight stigma in their lives, whether it is unfair treatment, teasing, bullying, victimization, or discrimination, said psychologist Rebecca M. Puhl, PhD, the center’s deputy director. Family members and health care providers, including doctors, nurses, nutritionists, and mental health professionals, are some of the most common sources of weight stigma, often “assuming that people with higher weight are lazy,



Obesity is caused by many factors, including biology and genetics as well as social determinants of health. Psychologists can better help patients by educating themselves about the complex relationship between weight, disease, weight stigma, and weight cycling.

lacking in motivation, have poor self-control, and are at fault for their weight,” she said.

Psychologists may want to examine their own implicit biases and assumptions, said Devlin, who recommends they take the online Implicit Association Test for weight offered by Project Implicit, which was founded in 1998 by scientists from the University of Washington, Harvard University, and the University of Virginia to educate the public about bias and to collect data and conduct research.

Weight stigma has far-reaching consequences. “It is associated with increased risk of eating disorders, anxiety, depression, death

by suicide, and poorer health outcomes,” said Cheri A. Levinson, PhD, an associate professor in the Department of Psychological and Brain Sciences at the University of Louisville who directs its Eating Anxiety Treatment (EAT) Laboratory and Clinic and has studied harms (*The Behavior Therapist*, Vol. 46, No. 7, 2023). Weight stigma can also lead to lower patient trust in providers, poorer provider-patient communication, reduced quality of patient care, inadequate medical equipment to accommodate patients of diverse body sizes, poorer patient adherence and treatment outcomes, and patient avoidance and delay of care, according to

Puhl's research (*Gastroenterology Clinics of North America*, Vol. 52, No. 2, 2023).

STRUGGLES WITH WEIGHT LOSS

The most studied comprehensive lifestyle interventions for weight management have been face-to-face, weekly group meetings led by teams of experts from psychology, nutrition, and kinesiology, said Hollie Raynor, PhD, RD, LDN, a clinical psychologist and registered dietitian and the executive associate dean of research and operations in the College of Education, Health, and Human Sciences at the University of Tennessee, Knoxville. Participants discuss progress in reaching dietary and physical activity goals, solve problems, and share their challenges and successes. A psychoeducational component focuses on a behavioral strategy, such as goal setting, self-monitoring, or stimulus control, and a homework assignment to work on goals, said Raynor.

The focus is on changing behaviors to "improve health and help individuals with their weight, be that weight loss, weight-loss maintenance, or weight-gain prevention," said Raynor. In scientific studies of these programs, "we see a large amount of variability in terms of response," she said.

The Look AHEAD trial, funded by the National Institutes of Health, followed for almost 10 years adults with Type 2 diabetes who were overweight or had obesity, making it one of the longest studies of a comprehensive lifestyle program. Participants were randomized to either the intervention, which promoted

weight loss through caloric restriction and increased physical activity, or to the control arm to receive diabetes support and education. The largest changes in behaviors and weight occurred at around 6 months. "But then there are challenges with maintenance over time," said Raynor. Members of the intervention group lost, on average, 8.6% of initial body weight versus 0.7% for controls in the first year, but they regained weight and, by study's end, had lost 6.0% versus 3.5% for controls (The Look AHEAD Research Group, *New England Journal of Medicine*, Vol. 369, No. 2, 2013).

Still, on average, they did lose weight. However, that average figure "hides a difficult reality," said Berman, in that close to half the people in the intervention arm of the study either gained back all the weight they lost by year 4 or never lost any weight at all (The Look AHEAD Study Group, *Diabetes Care*, Vol. 39, No. 8, 2016).

Randomized controlled studies like the Look AHEAD trial involve "motivated participants, in highly controlled settings, doing state-of-the-art treatments, with perfectly trained clinicians—the best-case scenario," said Berman, adding that the results are difficult to replicate in real life. In addition, 6% weight loss, or 12 pounds for someone weighing 200 pounds, is much less than the amount most patients expect to lose when they diet, she said.

"Even as an obesity intervention researcher, I don't feel like the intervention I research is the right thing for every single person," said Raynor. "People should go through that process with their health care providers to

determine what is the right choice for them."

A COMPLEX RELATIONSHIP

"It is important for psychologists to understand that the relationship between weight and chronic disease is not a simple causal relationship" so that they do not reinforce the message to patients that the primary solution to chronic illness is weight loss, said Devlin. "The relationship between weight and disease is also confounded with weight stigma and weight cycling [losing and gaining weight repeatedly], which have negative health consequences that are often attributed to 'obesity,'" she said.

When looking at the broad population, research shows that obesity increases the risk for high blood pressure and high cholesterol (risk factors for heart disease), Type 2 diabetes, asthma and sleep apnea, gallbladder disease, and stroke. According to the CDC, 13 cancers are associated with obesity, including thyroid, breast, ovarian, and pancreatic cancer. Obesity is typically defined as a body mass index (BMI) of at least 30.

But the picture becomes muddled at the individual level. Overall weight is less important than how fat is distributed, according to research. People who have more visceral adipose tissue—the fat that wraps around organs deep inside the abdomen and produces proteins and hormones that lead to chronic, low-grade inflammation—are at higher risk for diabetes and cardiovascular disease than someone who stores fat in their hips or buttocks or under the

KEY POINTS

1

A weight-loss-first approach has poor long-term efficacy outside of drugs and surgery.

2

Scientific evidence shows that genetic and biological factors as well as social determinants of health govern body weight; nevertheless, many health professionals still believe that weight is a matter of personal responsibility and willpower.

3

Self-acceptance-based approaches have less attrition than weight-loss programs, and preliminary evidence shows they are effective at improving patients' mental health (Dugmore, J. A., et al., *Nutrition Reviews*, Vol. 78, No. 1, 2020).

skin. Research has shown that “humans exhibit remarkable variability in body fat distribution for a given BMI” (Neeland, I. J., et al., *Circulation*, Vol. 137, No. 13, 2018). In June 2023, the American Medical Association distanced itself from BMI, calling it “an imperfect way to measure body fat.”

The accuracy of BMI as a proxy for health risk is complicated by the obesity paradox. People with obesity who have established cardiovascular diseases, heart failure, end-stage renal disease, and cancer have a better prognosis compared with so-called normal-weight people (Neeland, I. J., et al., *Circulation*, Vol. 137, No. 13, 2018).

In studies, the impact of comprehensive lifestyle programs for weight loss on physical health outcomes and mortality is mixed. For example, the Look AHEAD trial did not achieve its end point of reducing cardiovascular events and was ended several years early (The Look AHEAD Research Group, *New England Journal of Medicine*, Vol. 369, No. 2, 2013).

On the other hand, results of the Diabetes Prevention Program, a major study sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), showed that modest weight loss, dietary changes, and increased physical activity can reduce the incidence of Type 2 diabetes in people at high risk for the disease (Diabetes Prevention Program Research Group, *New England Journal of Medicine*, Vol. 346, No. 6, 2002).

Perpetual dieting carries risks for patients’ mental and physical health, said Berman. Repeated failure at reaching unrealistic

goals can increase risk for depression, and weight cycling can harm mental and physical health, she said (Quinn, D. M., et al., *PLOS ONE*, Vol. 15, No. 9, 2020; Gaesser, G. A., & Angadi, S. S., *iScience*, Vol. 24, No. 10, 2021). In Devlin’s clinical experience, she has found that chronic dieting can lead to or exacerbate eating disorder behaviors, which are strongly associated with negative health outcomes.

NEW WEIGHT-LOSS DRUGS

Psychologists may find their higher-weight patients asking for advice about taking GLP-1 receptor agonists, a new class of drugs that has been approved by the U.S. Food and Drug Administration for diabetes management and more recently for weight loss under the names Wegovy and Zepbound.

Oprah Winfrey, Tracy Morgan, Emily Simpson, and other celebrities have talked publicly about taking the drugs, and demand is outstripping supply. In one clinical trial of semaglutide, the active ingredient in Wegovy, participants lost, on average, 15.2% of their body weight at 104 weeks with medication plus lifestyle changes. That compares with 2.6% weight loss for controls (Garvey, W. T., et al., *Nature Medicine*, Vol. 28, 2022). More recent clinical trials found that the drugs significantly cut heart failure symptoms and the risk of heart attack and stroke. The journal *Science* named GLP-1 drugs the Breakthrough of the Year (Couzin-Frankel, J., *Science*, Vol. 382, No. 6676, 2023).

But the drugs are prohibitively expensive and often not covered by insurance. They have side effects, like nausea and vomiting,

and weight loss seems to plateau after a year. If a patient stops taking the drug, much of the weight returns and the health benefits disappear.

Psychologists can help patients who ask about the drugs gain a deeper understanding of them. “And clients should know that we don’t have long-term data on either efficacy or safety” because trials of the drugs lasted no more than 2 years, said Berman. For example, both Wegovy and Zepbound have a boxed warning of a risk for thyroid C-cell tumors, based on animal studies, but it will take years to know whether they are associated with a higher risk in humans for this rare cancer (Ruder, K., *JAMA*, Vol. 330, No. 22, 2023).

WHAT PSYCHOLOGISTS CAN DO

Evidence supporting non-dieting, self-acceptance approaches for enhancing physical health in patients with chronic diseases should be considered preliminary, but non-dieting approaches “have substantially lower attrition,” said Berman, and research suggests that they are comparable or superior to weight loss in terms of psychological outcomes (Dugmore, J. A., et al., *Nutrition Reviews*, Vol. 78, No. 1, 2020; Rauchwerk, A., et al., *Journal of Nutrition Education and Behavior*, Vol. 52, No. 11, 2020). In her practice, Berman uses a treatment approach and training for clinicians that she has developed called Accept Yourself that follows these principles.

Psychologists should first be prepared to advocate for weight acceptance, said Berman. For

FURTHER READING

The need for future research into the assessment and monitoring of eating disorder risk in the context of obesity treatment

McMaster, C. M., et al. *International Journal of Eating Disorders*, 2023

Joint international consensus statement for ending stigma of obesity

Rubino, F., et al. *Nature Medicine*, 2020

Eating-related and psychological outcomes of health at every size intervention in health and social services centers across the province of Québec

Bégin, C., et al. *American Journal of Health Promotion*, 2019

Consequences of obesity

Centers for Disease Control and Prevention, July 15, 2022

example, “Can we get ourselves on wellness committees in our workplaces, which are often very weight focused, and work for change there?” she asked.

Psychologists should also be prepared to speak with a patient’s health care providers, said Berman. For example, Rachel Millner, PsyD, CEDS-S, CBTP, a clinical psychologist and certified eating disorder specialist in Newtown, Pennsylvania, discusses with doctors how weight-loss attempts are often unsuccessful and how weight cycling is harmful, and she will ask them to offer the same care and advice they would offer a thin person.

Both Berman and Millner also help patients become better self-advocates. “Some of my clients do well with writing out some boundaries before they go to the doctor’s appointment because they know that when they get there, it’s too hard for them to speak up,” Millner said. They will hand the doctor the document, which might say, “Don’t weigh me; don’t discuss my weight.”

“I’ve coached patients to say, ‘I have knee pain and you’re telling me to lose weight, but I’m just curious, what would you say to a thinner person who also has knee pain?’” said Lauren Muhlheim, PsyD, FAED, CEDS-S, a clinical psychologist and certified eating disorder specialist in Los Angeles, adding that there are always other solutions, such as pain management or physical therapy. “Physicians just don’t often consider them when they see a patient in a larger body,” said Muhlheim.

Psychologists may want to work with patients on body



image and self-acceptance, said Muhlheim, who uses a CBT workbook on self-compassion. “When people in larger bodies are sold weight loss, they’re often kind of putting their lives on hold and waiting for their lives to start until after they’ve achieved this weight loss,” she said.

Instead, Muhlheim’s goal is to help them start building a life now. For example, she encourages patients to clean their social media feeds and unfollow influencers who are promoting a thin ideal. “I encourage people to deliberately follow more diverse bodies,” Muhlheim said.

While Berman’s approach of self-advocacy and self-acceptance does not focus primarily on patients changing individual behaviors, it does

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include the principle of eating for well-being. “That means having flexible, individualized eating behavior that is based on internal hunger cues, not a number on a scale or a calorie target,” she said, adding that listening to and trusting one’s body can be a radical idea for patients with a long history of weight stigma and multiple weight-loss attempts. When it comes to exercise, clinicians should support movement as a joyful aspect of life and not a moral requirement, said Berman.

Sometimes medical providers make recommendations that can be harmful to patients with eating disorders, Devlin said, because they may not be well versed in psychology. “I have a client with Type 1 diabetes who is struggling with high blood sugar at night, and she also has an eating disorder. Her endocrinologist told her, ‘Don’t eat after 8 p.m.,’ which is a terrible idea because then she’s going to start night eating.” In patients with eating disorders, loss of control over food consumption is a common effect of attempts at dietary restraint, she said. Psychologists should be prepared to educate such a provider, said Devlin, who also recommended that psychologists not experienced in eating disorders refer the patient out or consider getting trained.

Levinson recommends that clinicians think carefully about the office environment and ask themselves if they have chairs, for example, that are suitable for all body types or pictures on the wall of only thin people.

“It is really important to think about creating an inclusive environment,” she said. ■

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.

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