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Extending the Benefits of Addiction Treatment An Interview with Dr. James McKay

William L. White

Emeritus Senior Research Consultant

Chestnut Health Systems

bwhite@chestnut.org



Introduction

One of the major milestones in the modern evolution of addiction treatment has been the reconceptualization of addiction as a chronic disorder and attending

calls to move beyond acute care models of intervention to models of sustained recovery management. This trend has been propelled in part by a growing body of post-treatment outcome studies and the evaluation of continuing care strategies that could potentially elevate long-term recovery outcomes. One of the central figures in this paradigm shift is Dr. James McKay, Professor of Psychology in Psychiatry, Department of Psychiatry, University of Pennsylvania School of Medicine. I recently (March 2015) had the opportunity to interview Dr. McKay about his research activities and the state of continuing care in the United States. Please join us in this engaging conversation.

Early Career

Bill White: Dr. McKay, could you describe some of the influences and circumstances that led to your decision to specialize in addiction research?

Dr. James McKay: I started playing the guitar in middle school, and by the end of high school that's about all I wanted to do. I played in a couple of rock bands and studied classical guitar pretty seriously during that period. I also was drinking a lot and doing a fair amount of drugs and not putting any effort into high school studies. I did not go to college right out of high school, since I had lost all interest in academics and was pursuing a music career. By the time I was in my early 20s, the music thing wasn't working out and my drug and alcohol use had gotten worse. After a couple of really scary experiences and some difficulties cutting back or stopping, I spent a month at Hazelden when I was 23. In the year after that, I decided to get out of the music business and go to college. I took community college courses for a year to get my feet wet again. It had been a long time since I'd done anything academic. I ended up going to

Loyola University in Chicago, which is where I lived and had grown up.

I went to Loyola thinking that I was going to continue in graduate school after college and become a clinical psychologist. I was very interested in addiction treatment and providing such treatment since it had been such a help to me. While at Loyola, I worked as a research assistant for Dan McAdams who was a personality psychologist and who had been a student of David McClelland's at Harvard. When it was clear I wanted to pursue a doctoral degree, Dan encouraged me to consider Harvard. I wanted to stay in Chicago, but he worked hard to push me out of the nest. I applied to a number of graduate programs, but ended up at Harvard working with David McClelland. The Harvard psychology department did not have strong addictions researchers at that time, but David McClelland had very wide ranging interests and supported my desire to focus on addiction-related studies. I did a clinical pre-doctoral internship at a methadone clinic in Cambridge, which was affiliated with Cambridge Hospital and also worked at the Brockton VA with Tim O'Farrell and Steve Maisto, psychologists who were doing addiction-related research. They got me involved in couples and family research and also early studies on relapse. Those were the early influences on my career. After completing my doctoral degree and a year of clinical training at McLean Hospital, I did a post-doc at Brown University, where Dick Longabaugh and Steve Maisto were big influences. Some of the early papers that I wrote made use of data that Dick had collected as part of his research or that Tim O'Farrell and Steve Maisto had collected in their work.

Bill White: You mentioned little specialization in addiction during your doctoral training at Harvard. Was that fairly typical of graduate psychology programs in the mid-1980s?

Dr. James McKay: Yes, I think so. There were no courses on addiction. There were courses on depression, on schizophrenia, on

other clinical disorders, on diagnosis, and psychoanalytic and cognitive-behavioral treatment at that time, but really, there was nothing on addiction specifically. Very little time was devoted to addiction in any of the other clinical courses that I took. My early addictions training came from the methadone clinic and then from a clinical internship I did at McLean Hospital where I was able to work at their addiction clinic and receive really good training and supervision. But addiction was not addressed in any significant way in my graduate program.

Bill White: What were the attitudes of psychologists toward their peers who chose to specialize in the treatment of addiction?

Dr. James McKay: I think a lot of it depended on the professor that you were working with. McClelland was a very broad thinker and valued work on applied issues and problems, so he saw addiction treatment as a very important area. Other professors thought that research on things like schizophrenia, depression, or bi-polar illness was more legitimate than a focus on addictions. There was still a lot of confusion then as to what addiction actually was. Was it a brain disease? Was it a personal failing? Was it just a bunch of indulgent people who didn't know how to say no to themselves? Seeing addiction as a personal failing made it somehow less important than disorders like schizophrenia, which was certainly not seen as the patient's fault. It's interesting that there was such a long-standing stigma or lack of interest in addiction from the academic community. I think this has changed over the past 10 years or so, with a number of doctoral programs that now have excellent training in addictions treatment and research, and the surge in interest in neuroscience in clinical psychology programs.

Bill White: At the time you entered the field, there was a split between people in recovery who were working in the field and people

who were entering the field with professional credentials. You entered with both recovery status and your doctoral training. I'm wondering if you felt any conflicts around that dual identity or pressure to disclose or not disclose your recovery status.

Dr. James McKay: That's a really good question and it's one I feel I should have grappled with in a more open way. I felt very strongly early on that it was important to establish myself as a legitimate academic researcher, based on my journal articles and grant writing, rather than my own personal experiences of addiction and recovery. So, I did not disclose my recovery status. I wanted to be known for my academic credentials and expertise, and felt disclosing having been to Hazelden and that I was a person in recovery would prevent or detract from that recognition. Looking back now, I think I could have been more open about those experiences. Part of the issue was my struggle with a shifting of sense of self, or identity. I had had this identity of being a guitarist, then the identity of being a person in recovery, and then the identity of being a graduate student and a budding academic researcher. It was hard at that point for me to integrate those things in a way that allowed them all contribute to my sense of who I was. It's taken a lot of my career to figure out how to integrate the musician, the person in recovery, and the academic researcher--along with the other roles that one picks up along the way, such as a husband and parent.

State of Addiction Treatment during Early Career

Bill White: You entered the addiction treatment field in the mid-1980s. How would you characterize the state of addiction treatment at that time?

Dr. James McKay: It was interesting because I worked at places where a lot of thought and effort were put into the design and execution of addiction treatment. It was

not seen as the poor step-child of the organization as it was in so many places. At McLean Hospital, addiction treatment was seen as a legitimate area of clinical work and research, and at Brown there were people doing all this innovative clinical research in the addictions. Then I came to Penn [University of Pennsylvania] where my original experiences were on the VA Addiction Recovery Unit, which was an incredibly progressive program at that time—offering veterans two years of outpatient care. So, in some ways, early in my career I saw the best of addiction treatment that was being offered. In the middle '90s, I got involved with many community-based treatment programs and quickly realized that not all treatment programs were as sophisticated or progressive as those to which I had first been exposed. Many community-based programs do not appear to have changed very much over the 25 years that I've been doing research; they're still very AA- and abstinence-focused, virtually all services are provided via group counseling, and most of the newer, evidence-based treatments are not available. In a lot of ways, they're run pretty much the way they were two decades ago. Certainly, there's some strength to that. That model has helped a lot of people, but there typically isn't much of a Plan B for people who don't respond well to it. I think that's one of the real limitations in the addiction treatment field. Too many programs offer one kind of treatment that works very well for a certain percentage of people, but if it doesn't work for you, few if any alternative approaches are offered.

Relapse Studies

Bill White: That leads me to one of your early areas of interest which was post-treatment relapse. How did that interest develop?

Dr. James McKay: I was just very interested in people who had been able to put some

stable recovery time together, but then began using again. I wanted to understand this process of deciding, if you could call it that, to resume alcohol or other drug use. I found this a very interesting issue and one critical to the evaluation of addiction treatment.

Bill White: Were there any conclusions you drew from those early relapse studies?

Dr. James McKay: Yes, a couple worth noting. The work early in my career with Steve Maisto and Tim O'Farrell was focused on relapse in alcoholic patients, and I was interested in expanding that to the world of the cocaine user. Using past alcohol research methodologies, I conducted retrospective interviews, asking people what had contributed to the onset of the relapse, what happened during the relapse, and what led to the relapse ending, with a particular focus on how had they been able to actually stop using. I was asking people after the fact, sometimes several months later, about the relapse experience in the same way that Alan Marlatt and others had studied alcohol relapse. The great early theories about relapse were all derived from that method. My focus was on trying to develop more psychometrically valid scales to evaluate the relapse experience.

As I was doing that work in the middle 1990s, Saul Shiffman began to publish work on his studies of relapse in nicotine users. Rather than doing retrospective interviews, he was equipping people with what were then called Palm Pilots that randomly beeped people multiple times during the day and asked a series of questions. Then if the person started smoking again, this data could be analyzed to more carefully scrutinize what was occurring as the relapse unfolded. Saul was gathering what he referred to as near real time data on smoking relapse. He then did some papers where he compared the results obtained from retrospective interviews versus the real time data. He found that you get very different results when you were able to ask people in real time what is happening. It became clear as the methodologies and technologies

improved that asking people several weeks after they've relapsed what led to the relapse simply didn't provide valuable data about the real experience.

It's now twenty years later and people are now starting to study cocaine relapse using smartphones to generate this real time data. The technology is finally at a point where some of the questions I was attempting to look at with retrospective interviews twenty years ago can now be addressed in a more rigorous fashion. People attribute their relapses to a variety of things-- negative affect, interpersonal problems, strong craving, and on and on, but I don't have tremendous confidence in such information from a scientific standpoint when it is gathered weeks or months after the onset of relapse.

Bill White: This suggests that, as we shift these methodologies, we could really begin to re-think our understanding of the relapse dynamic.

Dr. James McKay: I think we will. The field is moving toward increasingly sophisticated and nuanced ways of monitoring people during and following treatment. I don't know where this will all go. For example, there are now sensors that pick up physical arousal that could indicate craving when people aren't even really aware that that's what's happening. There are studies being proposed with all manner of technologies, including GPS to pinpoint where people are geographically when they start to experience drug cravings or when they start to use, and how that relates to the onset of relapse. That plus all of the neuroimaging work under way should make it possible to more fully understand the details of the relapse process.

Addiction and Family Functioning

Bill White: Another area that you worked on early in your career was the functioning of families affected by addiction. Could you describe some of this research?

Dr. James McKay: Yes, this was based on a lot of data that came out of a NIAAA study conducted by Dick Longabaugh. The study looked at the effects of adding interventions like conjoint marital therapy to traditional person-focused alcoholism treatment. I examined these effects and explored the idea of moderators. I looked at subgroups of patients in the hope that we could begin to determine what factors moderated the effect of additional services. One of the measures that Dick and I were interested in was a measure of autonomy, a personality measure. We examined whether one's rating on the autonomy scale could predict whether conjoint treatment was going to be helpful or not. In one study, we were able to confirm this hypothesis, but in another study, things actually came out completely backwards from what we had predicted. For example, we predicted that low autonomy patients would be more vulnerable to what was going on in their families because they theoretically were more affected by social relationships and more entangled with their families. Conversely, high autonomy patients were predicted to be less affected either positively or negatively by what was happening in the family, as they were more independent. We actually did find that that low autonomy patients who perceived that the functioning of their family improved during treatment drank less following treatment, whereas they drank more if they perceived their family functioning to get worse. For the high autonomy patients, there was no relationship between changes in family functioning and drinking outcome. So that came out the way that we had thought it would, but another study came out with findings opposite of what we predicted. There were some interesting findings that came out of that work that set the stage for other studies that followed. Part of what I took from these early studies was the importance of looking at outcomes in terms of specific subgroups—nuances that can get lost if you only look at the main effects of a study.

Treatment Outcome Studies

Bill White: You were among a cadre of research psychologists in the late '80s and '90s working on measuring outcomes of addiction treatment. What are some of the general conclusions you drew from those early studies?

Dr. James McKay: Some of these studies were about methodology and some were about outcome. A lot of the advancements focused on how to move the methodology forward to do a better job of really capturing what was going on during and following addiction treatment. For example, early studies that Tom McClellan and others in the field did back in the '70s and '80s had a pretty simple design. You'd recruit patients at baseline. You'd administer the Addiction Severity Index. You'd follow them for six months. You would administer it again and that would be the outcome study. And over time, it became clear that we needed to have more frequent follow-ups and that we needed to have a longer duration to really get a better sense of what longer term outcomes looked like. We evaluated patients more frequently and over longer periods of time. We collected more corroborating measures on substance use outcomes to supplement patient self-report. Early studies relied on self-report without urine tests for drugs or collateral informant interviews or the biological measures of drinking that can be obtained from blood. The results we have coming out of studies now are more sensitive, more reliable, and more valid than much of what was obtained in early studies. There was also a change in the sophistication of the behavioral components of these treatment studies, including standards for how a treatment should be operationalized in a research study, the use of manuals, quality of training, the use of adherence scales for the counselors providing the intervention, taping of sessions, and consistent supervision. All of these sharpened the conceptualization and assessment of the precise treatment ingredients being evaluated.

As the methods got stronger, the results, in some ways, have become more complex. I'm thinking of the increase in studies that yielded unexpected findings. For example, the work that Paul Crits-Christoph and colleagues did with the NIDA cocaine collaborative study, and some very interesting studies that Jon Morgenstern and colleagues did which produced surprising results. Project Match, one of the most sophisticated treatment outcome studies ever conducted, failed to confirm the outcome differences and matching effects across treatment that were expected. In some ways, as the methods got stronger, the results got a little more complicated. It was clear that people who went into treatment typically improved, but what became less clear were which interventions were superior and the precise mechanisms through which improvement was achieved. This has been a very exciting but also confusing era of addiction treatment research. Very recently, we seem to be getting a little better handle on how 12-step facilitation, motivational interviewing, and CBT work to promote reductions in substance use. This is encouraging.

Treatment of Co-Occurring Disorders

Bill White: In the mid-1980s, there was this incredible surge in interest in the treatment of co-occurring substance use and psychiatric disorders. You were among the researchers who began to look at the effect of psychiatric comorbidity on treatment outcomes. How did those studies originate?

Dr. James McKay: For me, that had become an area of great interest. Tom McLellan had done some excellent work in that area as had other people here at the Penn Center such as George Woody and Chuck O'Brien, and there were people doing work in this area at Yale and Brown. There was greater recognition that many people with addiction problems have co-occurring mental health issues and that both of these disorders need to be addressed within an integrated treatment process. In the studies that I did in the '90s, we routinely collected

mental health diagnostic information on people entering addiction treatment as part of the baseline assessments. We had data on these factors, so it was a natural step to analyze some of our data to see what effect, if any, the psychiatric diagnoses had on addiction treatment outcomes.

The two primary diagnoses that had been looked at in a lot of other studies were anti-social personality and depression, both of which were common in addiction treatment samples. I was interested in whether or not depression and anti-social personality were predictors of overall outcome or, even more interesting, if they predicted differential response to the different continuing care treatments that we were looking at. The work we did on anti-social personality did not yield much of anything by way of retention or outcome predictors. It didn't interact with treatment conditions so we didn't find, for example, that CBT-based continuing care was more effective for people who had anti-social personality than the more standard care.

We did have some interesting results around depression, which was that depressed patients actually attended more treatment sessions and had more cocaine-free urines during the treatment phase than participants who did not have depression. There have since been other studies suggested that the discomfort of depression increases help-seeking and treatment retention. But then we found that the depressed people, even though their cocaine use outcomes looked a little bit better during treatment, drank more frequently during follow-up and that cocaine use outcomes deteriorated more rapidly after treatment for the depressed versus the nondepressed patients. So, there was this interesting finding that the depression mobilized patients to get help, to get into treatment, and do a little bit better for a while but that, ultimately, depression exerted a negative influence on long-term recovery outcomes. This is particularly true of patients who had current depression when they entered treatment as opposed to those reporting lifetime depression but not current depression. Ongoing depression is a very

serious risk factor for relapse and requires assertive and continuing management.

Inpatient versus Outpatient Treatment

Bill White: You were involved in some of the first studies comparing inpatient and residential addiction treatment with outpatient addiction treatment. What were the findings from those studies?

Dr. James McKay: I was blessed by being able to use data that had been collected by Arthur Alterman and Tom McLellan here at Penn. They had focused in their papers on the main effect: residential versus outpatient. And what I was able to do was to factor in another variable that had been collected, which was whether the patients had been randomly assigned to these treatment conditions or had refused randomization and had either self-selected residential versus outpatient or had been placed in that level of care by a clinician. That allowed us to look at a methodological issue, which was, "Do you get the same results with randomized patients as you get with non-randomized patients?" This was a critical discussion given concerns that comparison of inpatient and outpatient outcomes may be biased by only including patients willing to be randomized to either setting. At that time, this question had not received a lot of attention in research studies. Random assignment of patients in outcome studies is the gold standard, but there are also patient and professional preferences that factor into level of care decisions. So it's important to be able to look at outcomes under those two different conditions just to see how similar they are.

Bill White: And were the outcomes different across those two groups?

Dr. James McKay: There may have been a few subtle differences but, by and large, we got the same outcomes whether or not subjects were randomized. The one limitation of this research—and it is true in

almost all the studies of inpatient versus outpatient treatment—is that it is considered unethical to assign someone to outpatient treatment who clearly seems to need inpatient treatment. As a result, people with severe psychiatric problems or serious medical issues, for example, were screened out of these studies. So, the actual research question ended up being: in a population that can probably manage in outpatient treatment, does getting inpatient treatment confer any additional benefit? We couldn't ultimately conclude that inpatient treatment offered such additional benefit under these circumstances. This is not surprising given that we were only randomly assigning people who probably could do okay in outpatient.

Continuing Care Studies

Bill White: One of your major areas of contribution has been on evaluating the effects of continuing care on addiction treatment outcomes. Was there a point in time when you saw yourself realizing this as a focus of your research?

Dr. James McKay: I was interested in relapse, and by extension, this question of what do you do to reduce relapse in people who've been treated. The idea of continuing care seemed important. Back in 1992, Chuck O'Brien was putting in a competing continuation of a NIDAA P50 center that he and Tom McClellan were directing. They were looking for additional studies to put into the center application and so Tom and Chuck sat down with me and asked if I would like to write a project for this center grant. I said, "Sure," and in a five-minute discussion, we all decided that continuing care would be the focus of that project. It was as much the influence of Tom and Chuck as my own thinking about that area. But once I wrote that proposal and it was funded, it became increasingly clear to me just how important the issue of continuing care was to the whole field. For a junior person, that's the sort of

niche you're really looking for. So I jumped into that and by 1998, it was quite clear that this was going to be a major focus of my career.

Bill White: You've had opportunities to write several research reviews answering the question, "Does participation in continuing care make a difference in terms of long-term recovery outcomes?" For people who haven't read those reviews, how would you summarize your answer to that question?

Dr. James McKay: This question requires a complicated answer, but the simple answer is that for the average patient, there is moderately convincing evidence that continuing care can enhance recovery prospects above and beyond what patients would normally get in an episode of treatment and linkage to AA or other post-treatment referral resources. In the average patient, the effect of continuing care is not very big. There was a meta-analysis done just last year by some folks who did a really good job. My reviews have primarily been qualitative reviews, where I just add up the number of positive versus negative studies and try to make some overall conclusions. A meta-analysis actually turns it all into numbers and there are statistical procedures for analyzing the data. You can make stronger statements with this method, and meta-analysis of continuing care studies concluded that there was a small but significantly positive effect for continuing care versus no continuing care across all the different patients. That's similar to the box score findings that I've done where I've found generally about half the studies seem to show a positive effect. I think what's interesting is it is beginning to appear that there are certain patients for whom extended continuing care is really important and there are other patients who get along just fine without it. So, I think that that's probably what's accounting for the average weak positive effects. There really are quite

different sub-group effects of continuing care.

Bill White: And how would you describe the patient group that can most benefit from continuing care?

Dr. James McKay: My sense is that the people who are going to benefit the most from extended continuing care are first of all patients who have a hard time getting abstinent at the beginning of treatment. If you're in an intensive outpatient program and you're continuing to use, we have pretty strong evidence from a recent study that you would benefit from extended continuing care, whereas the patients who quickly become abstinent and engaged in treatment may have less need of such care. The other patient groups that seem to benefit from extended continuing care are patients who have very poor social support and who remain enmeshed in alcohol and drug using family and social networks. Not surprisingly, they need something to counteract that influence. In our work, we've also found in a couple of studies that women benefit to a greater extent than men do. In our two big studies, there were pronounced effects in which women benefitted from continuing care to a much greater extent than men. Women in a standard community-based treatment program may be more vulnerable to relapse if they are not provided longer-term support.

Bill White: Some of your later research on continuing care has looked at telephone-based continuing care. What are some of the findings around the use of technology for continuing care?

Dr. James McKay: I think that the use of the phone to deliver continuing care came from the fact that many patients just don't want to keep coming back to the clinic week after week. They want and need support, but they don't want to have to come to the clinic forever. Telephone contact is more convenient for people who are returning to

work, who have childcare responsibilities, who have trouble with transportation, travel distances. We found that you actually can deliver effective continuing care over the phone, although, interestingly, not everybody prefers it. We always have a certain number of patients who, when given the option, would rather come into the clinic and meet staff and others former patients face-to-face.

The thing we're beginning to explore is the use of automated smartphone technology as a way of augmenting counselor-delivered continuing care. It can provide support 24/7 whereas access to continuing care contact with a counselor is limited to regular work hours. We're working with David Gustafson's group from University of Wisconsin on this. I think we're on the cutting edge of new forms of continuing care that provide an interface of technology and traditional counseling. Our challenge will be how to maximize the strengths of each of these two modalities and how to combine them in a way that elevates long-term recovery outcomes.

On Recovery Management

Bill White: Under your influence and the influence of people like Tom McClellan and others you've referenced, the field has started to shift from acute care models of treatment to models of sustained recovery management and what you've described as concurrent recovery monitoring. How would you assess the progress of the field in making this transition?

Dr. James McKay: I think there's been progress. There has been excellent research on continuing care by a number of investigators, including Mike Dennis, Chris Scott, and Mark Godley from Chestnut Health, and Connie Weisner and colleagues out at Kaiser and UCSF. The idea of continuing care and more recovery-based approaches are certainly more popular and talked about a lot more now. Even some of the old-line residential programs like Caron, Hazelden, and Betty Ford have initiated

extended continuing care programs that include things like telephone-based recovery checkups. The need for sustained recovery management is widely discussed and an increasingly accepted model of care. The struggle is that it's a lot easier to talk about it and lay it out on paper than it is to actually do it. Implementing effective continuing care is difficult on a number of different levels. There are all the logistic and payment-related issues. There's the question of coordinating care: Who is responsible for continuing care when multiple organizations have been involved in the patient's continuum of care? Even when you have all the bells and whistles and you provide a seamless continuum, patients still disappear on you. They lose motivation, and they drop out. How to retain people, even when you have a great continuum, becomes a really tricky question. That may be where some of the new technologies can help. We're always dealing with the fact that it is a challenge to keep people engaged--both when they're getting on with their lives and when they are really struggling.

Bill White: Are we as a research community at a point where we can tell the typical program one or two things that they can do to enhance recovery outcomes of their patients?

Dr. James McKay: I talk to programs about paying close attention to how the patient is doing in the first few weeks of treatment. Are they making progress toward the goals of treatment? Have they stopped using? Do they seem to have good social support and motivation for change? For patients who are not making good progress, I would be particularly focused on trying to arrange for extended recovery support for them, whether it's continuing care or a longer stay in treatment. Such patients may need closer linkage to community supports such as assertive linkage to AA and assistance getting a sponsor. Plans for continuing care for these patients must begin almost

immediately rather than waiting until the end of treatment to figure out what they need next. I think what we're learning is that initial progress in treatment is a really good predictor of how people are going to do later on and who's going to need the most additional long-term support.

Bill White: What kinds of real world obstacles are you encountering in delivering such long-term support?

Dr. James McKay: I can give you an example. We're running into a problem with a study where we want to use program counselors to provide extended telephone continuing care to patients after primary treatment. The idea is that by using the same counselors, we will enhance continuity of care and support and prevent these patients from deteriorating to the point that they need readmission to acute care services. The problem we've run into is state regulations that require a patient be discharged once they stop coming to the clinic. After 30 days of no clinic contact, you have to discharge the patient. So, when the counselor is calling the individual say two months later, he or she is no longer a patient at the clinic. As a result, the counselor is not protected under the clinic's malpractice insurance for work with this individual. Understandably, the counselors don't want to provide continuing care if they have no insurance coverage for this professional activity. It's a double bind. You want to provide extended counseling and support to a discharged patient, but you don't have insurance coverage once the patient has been discharged from treatment. Philadelphia is a pretty progressive city and they're trying to do something about this, but the state laws and regulations now stand as obstacles to moving beyond acute care models toward sustained recovery support.

Science-based Addiction Treatment

Bill White: You've served in editorial positions for some of the field's leading science journals. How would you assess the

efforts that have been made to create science-based addiction treatment?

Dr. James McKay: There have been such efforts at every level, with a particular emphasis on providing effective treatments and tailoring treatment to the needs of particular groups of patients. What has been challenging is that the more studies we've done, the more confusing the picture has become. We see what looks like a powerful intervention in the first couple of studies that then appear to be less effective in subsequent high quality replication studies. The effects fade and it then becomes harder to know from the standpoint of science whether we should be providing treatment A or treatment B—or whether in fact both approaches are equally effective for the average patient. As our science becomes more rigorous, it can tell us some things, but other areas remain contradictory and confusing. There are a few exceptions to this general trend. For example, I think the literature on contingency management for stimulant disorders, that is rewarding people for cocaine-free urines, is remarkably consistent and positive. While you're paying people for cocaine-free urines, you're going to greatly reduce their cocaine use compared to other interventions that don't involve incentivizing abstinence. That's pretty clear. But there are very few stories in addiction treatment that are as straightforward as that.

There are a lot of current efforts to understand how addiction treatment actually works by trying to isolate its active ingredients. What really accounts for its effects? The more this work proceeds, the more complicated the story becomes. In the world of behavioral interventions, which is the world that I'm most familiar with, it's a pretty mixed story, all while the quality of the research keeps getting better. It would be nice for the field if we had more coherent, clear findings to disseminate, but, generally speaking, we don't. More and more, I find myself saying "it's complicated" and "it depends on...." when I'm asked in social or professional functions, "What are the best treatments for addiction?"

Bill White: Could you give an example of a frontier area of addictions research that needs sustained exploration?

Dr. James McKay: One area would be the very large number of people who don't have severe enough addiction problems to qualify for a full substance use disorder diagnosis but who are engaging in risky drinking and/or other drug use. They are at great risk for all sorts of bad outcomes--accidents, violence, medical issues, and so forth, but we know little about them and have few models for helping them. We need cutting edge tools to help them either to cut back or to stop using. These are typically not treatment-seeking people, so we have to figure out new ways to reach them and new methods to assist them. For every person with a full blown substance use disorder who enters addiction treatment, there are probably ten or twenty people engaging in risky alcohol or other drug use. This is going to be an exciting area going forward as we try to figure out how to best help these folks.

Career-to-Date Retrospective

Bill White: As you look back over your career to date, what do you personally feel best about?

Dr. James McKay: There are a couple of things. I feel very fortunate to have had the opportunity to collaborate and work with people in the field who are, by and large, very compassionate, dedicated, and inspired clinical researchers. I think the field itself is a wonderful field with a lot of supportive people whose work is very good. I feel good that a lot of my work has been done in real world clinics. I've been pretty committed to studying how to improve treatment for patients in clinics. Given my own early history of alcohol and drug problems, I feel like I've been able to give back some of the help I got as a young man. Frankly, I am grateful for just having survived

my late teens and early twenties, and to have gone on to do something productive and personally meaningful. I have had the opportunity to work on interesting applied problems that affect a lot of people. I've been fortunate to be in an area where doing good work matters and has the potential to affect individuals, families, and communities.

Bill White: Is there any guidance you would offer others who today might be thinking of exploring a career in addiction research or addiction treatment?

Dr. James McKay: I hate to be negative about this, but the truth is that it's gotten much harder to get money to do addiction-related research. The kind of career that I've had where I've been grant-funded for my entire career on soft money in a medical school environment has been great. It's afforded me tremendous freedom and flexibility, but it's harder and harder to get money to have that kind of career. So, I think that people considering work in this area should be thinking about combining perhaps a teaching position with some research or a position in the VA or something where there is some hard money support that provides security to sustain this work for the longer haul.

The other thing is that for better or for worse, the addiction research field is becoming increasingly focused on biomedical research. The hope is that if neurobiological research can reveal what makes people vulnerable to addiction at a biochemical level, then there may be medications or other medical interventions that can fix that. Potential researchers will have more opportunities if they're open to doing that kind of neuroscience-related work. People who like me are interested primarily in behavioral interventions will find research funding more difficult to garner and sustain. I think people earlier in their careers need to weight their choices in light of the trends and what's going to be possible. I think there will actually be quite expanded opportunities in the clinical practice of addiction medicine and addiction counseling as a result of such things as the Affordable

Care Act, parity, and so forth. I think this could be an exciting time clinically as new models of care are rolled out with greater integration with primary care. I think there are going to be a lot of opportunities.

Bill White: Dr. McKay, thank you for taking this time to reflect on your work in addiction research.

Dr. McKay: It's been a pleasure, Bill.

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Appendix: Selected Bibliography / Recommended Reading

Books

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