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# Enhancing Long-term Addiction Recovery Outcomes: An Interview with Dr. Christy Scott

William L. White

## Introduction

Calls to shift addiction treatment from acute care models of intervention to models of sustained recovery management have been propelled by research into the long-term course of substance use disorders and studies evaluating new approaches to extending the effects of addiction treatment. One of the leaders within this research arena is Dr. Christy Scott, Director of the Lighthouse Institute (the research division of Chestnut Health Systems). The studies she has led on post treatment outcomes and continuing care are among the most important conducted in recent decades and whose findings have great import for the future design and conduct of addiction treatment. I recently had the opportunity to interview Dr. Scott about her past research and the direction of her future studies. Please join us in this engaging conversation.

## Early Career

**Bill White:** I often get questions from students about how to get started in a career in addiction-related research. Could you describe how you came to specialize in research related to addiction treatment?

**Dr. Christy Scott:** (Laughs) You would like to think such decisions were well-planned, but that is often not the case. The primary goal in my career was that I wanted to study problems and their solutions over the long run as opposed to taking snapshot pictures at a point in time, as is typical with most research. I was doing evaluation work in Champaign, Illinois and had read a lot of the evaluation work done at Lighthouse Institute. I was keenly interested in the work they were doing and it was through my subsequent involvement there that my career took on an addictions research focus.

**Bill White:** You describe moving into addiction-related research by serendipity as opposed to a field you chose and prepared for. Do you think that's typical for most addiction researchers?

**Dr. Christy Scott:** I don't really know the answer to that. We do run into a lot of folks who've had a personal experience or family issues of addiction which piqued their interest and motivated them to want to do something in the addictions field. In my case, I was working for an educational psychological testing company in Champaign, Illinois, where I started the evaluation department to assess the impact of various human service interventions. I had worked with Frank Shepke on one project with the Department of Children and Family Services, and Frank had then gone to work at LI. He later called me to ask for my assistance on evaluating a new LI project and then invited me over to visit the LI staff. So, I came over and he introduced me to Mark Godley and other staff. As it turned out, LI had submitted a proposal to help evaluate Target Cities, with the proviso that if funded, they would open a Chicago LI office. When that funding

came through, Mark invited me to come to LI and open the Chicago LI office. I came to LI through my association with Frank Shepke and the opportunity afforded by the Target Cities project—what is now the longest running LI project.

**Bill White:** The Lighthouse Institute rests within a community-based treatment organization (Chestnut Health Systems), as opposed to a medical institution or an academic institution. How do both of you think that has influenced the work that's been done at LI?

**Dr. Christy Scott:** (Laughs) That's interesting because Northwestern just invited us to become adjunct associate professors. I think this differs across LI researchers. For example, Mark and Susan Godley were able to use the Chestnut treatment sites to recruit participants for many of their adolescent studies. In Chicago, where I had to recruit participants from other treatment organizations, our association with Chestnut is actually an obstacle. I've been called into multiple CEOs' offices in Chicago asking me why in the world they would let me come in as a researcher when I worked for a competing agency. I've been in over 35 agencies in the Chicago area, and establishing trust on the part of all of those organizations has been a major part of my work here.

**In the Beginning**

**Bill White:** You and your research team have conducted a large number of studies and evaluations over the past decades. Was there a beginning master plan for the types of studies you wanted to conduct?

**Dr. Christy Scott:** Yes, there really was. Mike Dennis and I were very interested in looking at the ways people recovered or experienced challenges following addiction treatment so we wanted to assess people over time to see how the recovery process unfolded over time or got sidetracked. We suspected early on that there were critical variables that were related to or could predict early abstinence but that these might not be the same variables that predicted long-term recovery.

**Bill White:** At the time you started your studies at LI, low follow-up rates had long compromised the ability to generalize findings from longitudinal studies of addiction and addiction treatment. You introduced new technologies at LI that elevated follow-up rates to above 90 percent that have now become the expected norm for such follow-up studies. Could you describe how you achieved that level of follow-up rates?

**Dr. Christy Scott:** Sure. We approached our first follow-up study pretty much like everybody else did. The night before the first client was due, we said, "Oh, we have clients due for follow-up tomorrow. What do we do?" We had a fairly large cohort of clients that were coming due, and we'd never done this before. So, we quickly dug a hole, like so many researchers before us had done. I think it was the fear of failure in one of Lighthouse's largest studies at that point in time that forced us to find a better way to do this. We put our heads together and figured out systems to manage follow-up in a proactive way as opposed to a reactive way. There were three keys to our success. One was that we were finally able to put in standardized protocols for specific times we would send out mailings or reminders for upcoming interviews. Second, we got better at

getting locator information and using a system to track when we had contacted people. Finally, we added a very strong outreach component to locate people who were initially lost to follow-up. People who were in stable recovery were incredibly helpful in building this effort and helping us fine-tune the model to the success it is today.

**Bill White:** I remember you telling me that to achieve high follow-up rates you have to create space in people's lives in which you are valued. I was always really struck by that. Do you think that kind of approach could be adapted by treatment programs to enhance post-treatment continuing care?

**Dr. Christy Scott:** I really do think that it could. We learned very quickly that the individuals in our studies were our customers and that without their cooperation and engagement we were not going to be successful. So early on, we learned the value of making a space in peoples' lives and trying to communicate how important their participation was. We try to make sure that they get something out of the relationship rather than us wanting something from them so we needed their cooperation.

**Bill White:** I remember you telling me once that many of the clients that you saw in your Chicago cohort had many people coming and going in their lives during times of crisis, but very few people who hung in with them for the long-term. It seemed like one of the things you created with your follow-up studies was that you were some of the most consistent people in the lives of the people you were following. Is that accurate?

**Dr. Christy Scott:** I believe so. And in addition to being some of the most enduring relationships they have, we are also very non-judgmental. We just are finishing up the nineteenth year of our initial study. If you can imagine over the 19 years, we have seen people in the midst of incredibly terrible situations, but we were here, we didn't judge. Then they'd come in and things would be going very well. Our message to them in both situations was this: "You are unconditionally important to us and we highly value what you bring to the study." In this last round of interviews, I added a paragraph or two in the informed consent to reiterate the incredible contribution that they and their peers were making to the field of addiction treatment. Some of the things that we've been able to change have come as a direct consequence of their willingness and generosity to hang in there with us and provide information.

**The Pathways Study**

**Bill White:** Could you talk a little bit about the original Pathways study?

**Dr. Christy Scott:** Sure. Well, the Pathways Study has had several lives. It started off as an evaluation of the Chicago Target Cities Project that began in 1993. The overarching goal of that CSAT-funded project was to centralize intakes to substance use treatment across large cities in the U.S. It was clear that people who wanted access to treatment could often be assessed multiple times before accessing treatment, and it also became clear that wherever they showed to treatment, they would be served there. There was growing concern that this was not the optimal way to assess someone's needs and to match them to treatment. The Target Cities study lasted for six or seven years and allowed us to look at the differences in outcomes for about 3,000

clients who had either entered treatment through a central intake unit or directly through agencies. Over time, CSAT and a group of folks from the Target Cities projects began to understand the value of looking at outcomes post-intake and we had a very large cohort with a very high follow-up rate. This was one of the first times this had happened, and it was felt much more could be learned from this cohort. So, CSAT then funded the Persistent Effectiveness of Treatment Studies (PETS) to continue to look at the evolution of recovery and addiction careers over time. Then NIDA became very interested and funded further evaluation of this cohort we were following. Over time, we've been able to document the cycles that people go through between treatment, recovery, incarceration, and relapse. With such a large sample and such high follow-up rates, this was an incredibly unique contribution to the field. The result was data that allowed us to view addiction as a chronic condition for some folks and to modify our approach to treatment for those with the most severe and complex substance use disorders. One of the most important contributions of this work is that we began to re-think how we provide treatment and how the long-term process of addiction recovery can best be supported.

**Bill White:** I was struck by your finding of how long the course of addiction could last and how many acute treatment episodes could precede the achievement of stable recovery.

**Dr. Christy Scott:** Yes, and here we are almost 20 years later following the individuals in the Pathway Study and we are moving us forward to answer key questions related to the mystery of that chronicity and what happens within the recovery process. One of the questions, given all of the research on the neurobiology of addiction, is, "Can the brain heal after two decades of heavy drug use interspersed with various periods of abstinence." We invited a group of 40 participants from the Pathways research to be involved in a pilot study that we're doing in collaboration with Northwestern University. Half have three or more years of abstinence after long using careers, and half have continued to use all these years. We're doing MRIs with both groups to find out whether certain areas of the brain heal following sustained abstinence. This study could offer an important source of hope for people with long addiction careers. It would be nice to be able to send a message that it's really not too late to heal the brain and go on to a better life, even after prolonged addiction. .

**Bill White:** That study could parallel research on how damage from smoking could be reversed after smoking cessation and the effects of that information has had in motivating people to stop smoking.

**Dr. Christy Scott:** That's exactly right.

**ERI Experiments**

**Bill White:** The findings from the Pathways Study led to your first study of early re-intervention following addiction treatment. Could you describe the first Early Re-Intervention (ERI) study?

**Dr. Christy Scott:** We randomly assigned participants following addiction treatment. Our study subjects were either provided quarterly interviews or assigned to be interviewed and also recovery management check-ups. In addition to having an assessment interview, if members of the latter group were found to be using drugs again, he or she met with a linkage manager who

used motivational interviewing to explore the upsides and downsides of their drug use with encouragement to consider re-entering treatment.

**Bill White:** And what were some of the key findings from that early study?

**Dr. Christy Scott:** That study was key for a couple of reasons. First of all, at that point in time, the feasibility of being able to do that kind of a study was highly questioned. Many believed you could not get people to come in for quarterly assessments over a span of two years. The Pathways and the ERI studies confirmed you could do quality studies with a high rate of sustained participation with this population. Second, the ERI I trial showed that we could use the ERI protocol to increase the likelihood of people returning to treatment following addiction recurrence, stay in treatment longer when they re-entered, and achieve better outcomes at two-year follow-up. We used our implementation data to propose changes to the protocol so that we could affect change quicker. ERI II was very effective and we were able to affect that change much earlier than two years out.

**Bill White:** The third ERI experiment involved using recovery management checkups with women offenders.

**Dr. Christy Scott:** Yes, given the rates of high risk behaviors within the women offender population, we modified the intervention and expanded it to target, not only treatment for substance use, but also HIV risk. We recruited women in jail and then, once they were released, we provide a 30-day, 60-day, and 90-day check-up and then continued quarterly check-ups for three years. We saw very similar results as we had in ERI II, although we were not quite as impressed with our ability to modify behaviors that elevated HIV risk.

**Bill White:** Were your findings related to RMC with women offenders such that you felt that this protocol could be adapted for larger scale implementation within the criminal justice system?

**Dr. Christy Scott:** Absolutely.

**New Technologies of Recovery Support**

**Bill White:** One of your more recent studies evaluates potentially new technologies of recovery support by using the smartphone as a tool for post-treatment continuing care. Could you describe that study?

**Dr. Christy Scott:** In this clinical trial, participants are randomly assigned to one of four conditions. The controlled condition is to re-enter the community as usual with access to the recovery supports normally available following treatment. The second condition involves use of ecological momentary assessments (EMA), in which clients are given a smartphone, alerted five times a day to complete a short assessment of the past 30 minutes about the persons, places, and things; their exposure to drugs and alcohol; their feelings; and the effects of these on motivation for drug use or sustained recovery. The underlying theory behind this is that these assessments help increase a person's self-monitoring and make them more aware of how the external and

internal factors impact their desire to use or stay in recovery. The third condition involves ecological momentary intervention—a set of interventions that are available through the smartphone. So, if I'm feeling like my drug craving is getting out of hand, I can go to one of the applications and use it. I can call my sponsor through it. I can find an online Twelve-Step meeting. I can do some exercises or meditate. It's real-time access to intervention. And then the last condition combines these two conditions. So, participants in this condition are alerted five times a day and asked to complete the survey. If they have certain indicators of risk, then they get a message that says, "People in your situation often find using one of the EMIs very useful. You might want to try to do that in the next 15 or 20 minutes." And then they have the same intervention on the apps on the phone as the EMI only condition.

**Bill White:** What's the timeline in terms of when that data will be analyzed and reported out to the field?

**Dr. Christy Scott:** We are now finishing the data collection. It will take about eighteen months before our findings are analyzed, written up, and published.

**RMCs in FQHCs**

**Bill White:** One of your other recent studies involves the use of recovery management check-ups (RMCs) within federally qualified health centers (FQHCs).

**Dr. Christy Scott:** Yes, this came about from our observation of a phenomenon during the eight years we worked with the State of Illinois on their SBIRT projects. Illinois implemented SBIRT –screening, brief intervention, referral to treatment--in various health care settings and one of the findings in the first five years was that most people who were referred for treatment didn't make it to treatment. That was very frustrating for all involved. Then Illinois received another grant to implement SBIRT in federally qualified healthcare centers. Once again, even though people were assessed and referred to treatment, most were not admitted to treatment. So, we approached the State about the potential of incorporating recovery management check-ups into the federally qualified health care centers. The results were exceptional. We successfully linked about 75 percent of patients to treatment and we had a really high conversion rate. Even when people refused the referral of the FQHC, they gave the FQHC permission for us to contact them. And we were able to convert a very high percentage of those refusals into treatment admissions.

**Bill White:** That's remarkable! To what do you attribute such success?

**Dr. Christy Scott:** I think that the healthcare field in general is under so much pressure to operate within a production model. They have to get people in and out in these very brief periods of time and there are demands to do so much in that brief time. I think understanding and having experience working with individuals who have substance use disorders is really helpful because you have to be pretty tenacious and understand that they have a lot of chaos in their lives. It's just one more appointment, and they didn't present to the health care clinic to talk about the substance use anyway. So, maybe they need a little cooling-off period before our Linkage Manager calls them. I think motivational interviewing (MI) is always a good way to approach people who are ambivalent about their drug use, about going to treatment, or about embracing a

recovery lifestyle. We use MI to talk with them about how to protect their health and some of the benefits of addressing the substance use.

**Bill White:** And I would guess the skills of your staff are critical as are your philosophy of valuing people as customers and providing a service relationship free of contempt.

**Dr. Christy Scott:** Exactly. We're not in the 15-minute production model. If we need to make more calls, that's what we do because our success is based on making those appointments and getting the care they need.

**Bill White:** You referenced the ability of the RMC intervention to link people to treatment. One of the concerns I've had is that even when people get to treatment and then go back to their primary physician or healthcare provider, there's really no continuing re-check on recovery status. Do you think RMCs could then be integrated into the long-term management of patients in recovery served within FQHC?

**Dr. Christy Scott:** You make a very good point. In fact, that was one of the critiques during the first review of the FQHC grant. We had not done a good job of setting up that communication feedback loop. So, we actually designed a component to feed back to the FQHC information about the patient and whether they're accessing treatment, how long they've been in treatment, and their response to treatment,. My hope is that we will be able in the future to get a status report from the treatment provider that can go back into the record at the FQHC to set the stage for such continued monitoring and support from the FQHC. There are a lot of regulations about how information passes between healthcare providers and substance use providers that are being sorted out in making this happen.

**Bill White:** Dr. Scott, your studies have illuminated the long-term course of substance use disorders and recovery from such disorders. To what degree have the implications of this work led to rethinking how addiction treatment is conceptualized and delivered in the U.S.?

**Dr. Christy Scott:** That's a good question. It's difficult from where I sit to see to what degree that is happening. My fear is that with the influence of managed care organizations and the push to integrate substance use treatment into primary healthcare, long-term perspectives on addiction and recovery management are being lost. We have data systems for specialized treatment but we may not have parallel data systems in primary healthcare that could help us measure such shifts in practice. I do have a further worry in this area. Twenty years ago when the Target Cities Project was birthed, the focus was on speeding access to substance use treatment by centralizing intake. Now it feels like we are moving toward the integration and co-location of mental health, substance use, and primary healthcare services. It does make for nice one-stop shopping, but I worry that, if you have to go to primary healthcare first to access substance use treatment, it may be more rather than less difficult for people to get treatment. I worry about individuals falling through the cracks and the lack of systems within integration efforts to prevent that. This is a very challenging population that needs a lot of safety nets—safety nets that rarely exist in the health care environment.

**Addiction as a Chronic Disorder**

**Bill White:** You and Dr. Dennis have written extensively about the reconceptualization of addiction and a chronic disorder and the need to shift from acute models of intervention to models of assertive and sustained recovery management. How would you gauge the professional or clinical response to your recommendations?

**Dr. Christy Scott:** I think it depends on what level you look. I feel like there was momentum to move in this direction, but I feel like it is being lost with all the other competing agenda items on the field's radar screen. I feel like we were on to something important but that the rug's been pulled out from under us. I don't really know what's going to happen.

**Bill White:** When I promote the value of recovery management check-ups based on your research, two common questions commonly arise. The first is, "Do we know anything from studies to date that would tell us what type of organization is best-suited to do recovery management check-ups—should it be the treatment organization, a recovery community organization, a managed behavioral healthcare, or some other monitoring organization?" The second is, "What types of people are best-suited to perform recovery management check-ups?" Does your research offer directions in response to either of these questions?

**Dr. Christy Scott:** As to the first, I believe a wider variety of organizations could do RMCs as long as they have performance indicators to keep people focused. We monitor the progress on linkage every week. Each worker has a rated percentage of people assigned to them that have been effectively linked to treatment that we pay very close attention to. RMCs can be integrated in any kind of agency, but I think the challenge is convincing the service provider that they can do it. These individuals have all sorts of challenges and obstacles in their lives, but the fact of the matter is they can be effectively linked to treatment.

As to the types of people who can best do RMCs, I have run in to some problems with some people in recovery doing this. And recovery is probably too broad a term. I should say individuals who were very staunch, rigid supporters of a particular approach to recovery, particular a Twelve-Step approach. Such individuals had a difficult time being Linkage Managers because they resented the fact that they were trying to help this person in a way that was inconsistent with what they felt were the responsibilities of a person going through Twelve Step recovery. People in recovery can do RMCs, but they may face some additional challenges doing it.

**Bill White:** That raises an interesting question about the supervision of the people that are doing recovery management check-ups. How important has such supervision been within your studies?

**Dr. Christy Scott:** It's incredibly important. We tape all of those sessions and then we have a certified MI [Motivational Interviewing] supervisor randomly review the tapes. We do that from the beginning to the end of the study to kind of make sure that everybody's staying within reasonable boundaries.

**Bill White:** And in terms of performance monitoring, if suddenly someone's linkage rate begins to decline, you can go back to the tapes to identify any problems that are emerging?

**Dr. Christy Scott:** Exactly.

**Career-to-Date Retrospective**

**Bill White:** What have been the biggest challenges you've encountered working in addictions-related research?

**Dr. Christy Scott:** The disconnects between research practice, policy, and funding have been major challenges, and the stigma associated with addictions has made it very difficult. I think practitioners' difficulty understanding the nature of addiction and the treatment implications of that lack of understanding have been very difficult, as has been administrators' entrenchment in a self-help model as the only pathway to recovery. The sporadic, unpredictable funding for treatment poses a major challenge to treatment research. We have begun to explore other recovery management technologies to find something that is useful to people other than treatment because, with the precariousness of funding, there may not be any treatment left for people in ten years.

**Bill White:** As you look back over the work that you've done to date, what do you feel best about in terms of your contributions to the field?

**Dr. Christy Scott:** Well, what I feel best about are the studies and the infrastructure we created to conduct them. We forged a technology for conducting these studies that pushed the whole field of treatment research to a higher standard. Once we began to consistently generate follow-up rates above 90 percent, rates far lower that had long been the norm no longer were acceptable. We achieved that through fearless self-appraisal. If something didn't work, we changed it and kept changing it until we got to the levels we've currently achieved. What I feel best about is that we created a structure that allowed us to do significant work with a very high degree of methodological rigor. That has allowed us to measure the trajectories of addiction and recovery in a large sample over 19 years. The detailed assessments have allowed us to look in an unprecedented way at such changes across time and across multiple dimensions. The recovery management check-up allowed us to extend the effects of treatment into our participants' natural environments and to actually enhance recovery stability and to intervene in ways that improve long-term recovery outcomes. We are now moving into the area of in-the-moment assessment and in-the-moment interventions and integrating brain and genetics research. It's quite amazing.

I think probably one of the most rewarding wonderful aspects of our research plan has been that Pathways has clearly allowed us to observe addiction and recovery careers over almost two decades and allowed us to develop a very long-term perspective. ERI gave us the opportunity to see it much closer in time over long periods of time so we could check in with people and see how they were doing every quarter. That's important because when you only interview people annually, there's a lot that you miss in that twelve-month time period. The opportunity to get a sense of how all of these factors, internal and external, interact every 90 days across three or four years was incredibly enlightening, and then, of course, the smartphones study is taking us into assessment in the immediate moment. We've gone from an extraordinarily long-term, broad prospective to in-the-moment assessment and connection to intervention. I think that's really been wonderful. As researchers, we've been so lucky and have had incredible

opportunities to do important work—all because people agreed to keep us in their lives for all of these years. I'm sure that wasn't the most pleasant thing for them, but they were wonderful to us.

**Bill White:** Let me ask a closing question. If you were meeting with a group of young Ph.D. candidates completing their doctoral work who were interested in specializing in addiction-related research, what guidance might you offer them?

**Dr. Christy Scott:** The field is moving towards hard science now and new technologies that did not exist ten years ago. Conducting addictions research today requires an amazing speed of adaptability. You have to have a keen sense of larger developments in the field and you have to adapt the work you want to do to those realities. I don't think we ever sold out the original vision of what we wanted to do with our research, but we have been on our tiptoes like ballerinas for 20 years trying to continually refit our vision into these larger trends. I mean, you have to be willing to move into areas and adapt your work as you go, including areas you may initially know little about. For example, we don't know that much about neuroimaging, so we are partnering with people who do and bringing what we know in recruitment, measurement, and follow-up. That's the kind of thing new researchers entering the field will need to be able to do.

**Bill White:** Thank you for taking this time to discuss your career and to review some of the studies you have led over these past years.

**Dr. Christy Scott**: Thank you, Bill, for the opportunity.

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