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Combination Treatment for One Year Doubles Smokers' Quit Rate

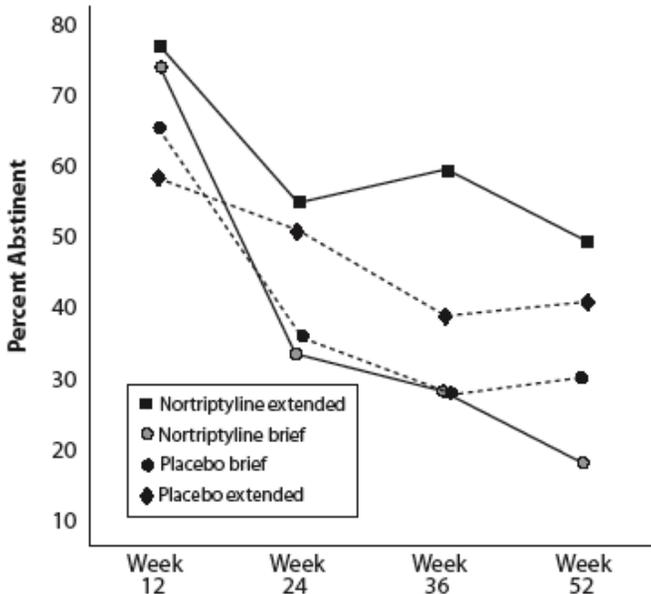
Research Findings
Vol. 20, No. 4 (March 2006)

By Patrick Zickler, *NIDA NOTES* Staff Writer

Most smokers understand the health risks associated with tobacco use and want to stop, but the addictive grip of nicotine makes quitting difficult; nearly 80 percent of smokers who try relapse within a year. Those poor odds can be improved, NIDA-supported investigators say, by extending the length of smoking cessation therapy to at least 1 year.

Among smokers who received medication and counseling for 12 months rather than the conventional 12 weeks, half were abstinent a year after quitting. This is more than double the success rate of other treatment programs, says Dr. Sharon Hall, who investigated the extended treatment approach at the University of California, San Francisco. "Smoking is not just a bad habit; it is a powerful and deadly addiction," Dr. Hall says. "It has to be treated with methods that are commensurate with its addictive properties, which are extensive and long term."

Smoking Cessation Rates Improve With Year-Long Treatment



After an initial 12-week therapy regimen, patients who received monthly counseling for 40 more weeks maintained higher abstinence rates than patients who did not. Concurrent nortriptyline therapy enhanced the advantage of extended counseling.

Dr. Hall and her colleagues assigned each of 160 trial participants who smoked 10 or

more cigarettes daily to one of four regimens. All the participants received nicotine replacement therapy (transdermal patch) and took part in five group counseling sessions during the first 12 weeks of the study. These 90-minute sessions concentrated on understanding health issues associated with smoking and quitting, developing personalized quit strategies, and avoiding relapse. The investigators gave half the participants a placebo and half nortriptyline, an antidepressant that Dr. Hall's research group had previously found helps smokers to quit. The researchers adjusted participants' medication doses to maintain blood concentrations of 50 to 150 ng/L.

At the end of 12 weeks, treatment ended for half of the participants. The rest continued their regimens of nortriptyline (40) or placebo (41) for 40 more weeks. During this time, they continued to participate in monthly 30-minute group counseling sessions and were contacted by phone 2 weeks after each session to reinforce counseling lessons.

At the end of weeks 24, 36, and 52, far fewer of the participants in extended treatment were smoking than were participants whose treatment ended after 12 weeks. At the end of 1 year, 50 percent of patients who had received nortriptyline and counseling throughout were abstinent, compared with 18 percent who got this treatment for only 12 weeks. Forty-two percent of patients who received extended counseling and placebo were abstinent at 1 year, compared with 30 percent of those who got them for 12 weeks.

"The highest success rate was with nortriptyline and counseling for 52 weeks," Dr. Hall says. "Extended treatment with placebo and counseling came in a very close second, suggesting that prolonged psychological support and counseling are important components in improved treatment outcomes." The mix of long-term combination treatment with both pharmacological and behavioral therapies reflects the complexity and power of smoking addiction, says Dr. Hall. "Smoking is more complex than just the physical addiction. There are psychological factors such as stress that can trigger a desire to smoke. There are social and environmental factors—a certain group of friends or a certain kind of meal or a certain type of gathering—that make a contribution, too," Dr. Hall says. "Simply treating the physical addiction doesn't address these psychological influences, which can trigger a relapse to smoking months or years after a person has quit."

"These findings are significant because they show that a combination treatment provided over an extended period has great potential to improve smoking cessation rates," says Ms. Debra Grossman of NIDA's Division of Neuroscience and Behavioral Research. "Dr. Hall has shown that providing smokers with a comprehensive extended treatment can achieve better abstinence rates than have ever previously been reported from a controlled trial."

Dr. Hall and her colleagues are continuing to test long-term treatments in two other studies. One involves smokers older than 50, a group with markedly poorer outcomes than younger smokers. The second will evaluate bupropion, a prescription medication specifically approved for smoking cessation treatment, in combination with counseling.

For some smokers, the prospect of a year-long course of treatment is daunting, Dr. Hall acknowledges. "But this may be what you need to do if you want to be successful. Smokers, as well as the practitioners who treat them, need to know that it is possible to achieve high rates of long-term abstinence. It is not a simple process because it's not a simple addiction. But it is worth it to stop doing something that can kill you."

Source

- Hall, S.M., et al. Extended nortriptyline and psychological treatment for cigarette smoking. *American Journal of Psychiatry* 161(11):2100-2107, 2004. [[Full Text](#)]

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Research Findings
Vol. 20, No. 3 (October 2005)

A Brief Encounter With Peer Educator Can Motivate Abstinence

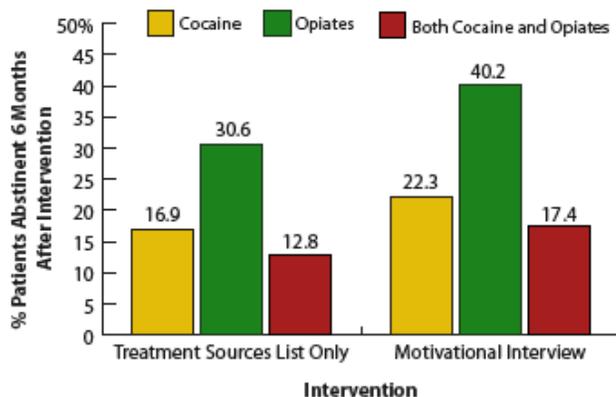
By Lori Whitten, *NIDA NOTES* Staff Writer

A single meeting with a peer addiction educator during a routine medical visit has helped out-of-treatment cocaine and opiate abusers attain abstinence, report NIDA-funded researchers who conducted a study at three Boston clinics. The peer educators were bilingual individuals in long-term recovery recruited from the same ethnically mixed community as the out-of-treatment drug abusers. The meeting consisted of a structured motivational interview that culminated in a plan for recovery and referrals.

"Talking with a person like yourself—someone who knows your language and culture and views you as an equal, who has successfully recovered from addiction—shows that change is possible and seems to motivate people to get off drugs. It's not a substitute for treatment, but it is a good first step," says Dr. Edward Bernstein of Boston University School of Medicine, one of the lead investigators of the study.

Dr. Bernstein and his coinvestigator Dr. Judith Bernstein hired and trained individuals who had been in recovery for at least 3 years to serve as peer educators and research assistants. This staff then screened 23,669 outpatients who were seeking routine medical care at Boston Medical Center walk-in clinics between May 1998 and November 2000. Altogether 1,175 patients (about 5 percent of those screened) met the criteria for study participation—they reported abusing cocaine, opiates, or both drugs during the past 30 days; scored 3 or higher on the Drug Abuse Severity Test; and were not in addiction treatment or protective custody—and agreed to participate. A research assistant met with each participant to administer further assessments, including an abbreviated Addiction Severity Index (ASI), and an educator then randomly assigned each patient to either an intervention or a control group. Similar proportions of patients in the two groups had abused cocaine (about half), opiates (about 10 percent), or both drugs (33 to 40 percent) during the month before the study (see "[Demographic Characteristics of 1,175 Study Participants](#)").

Motivational Interview During Routine Medical Visit Reduces Drug Abuse



Six months after meeting with a peer addiction educator during a routine medical care visit, patients who participated in a motivational interview had higher rates of abstinence than patients who received a treatment sources list only.

An educator conducted a motivational interview with each patient in the intervention group. This lasted from 10 to 45 minutes, engaging the patient in a discussion of drug abuse, its consequences, the gap between his or her actual and desired quality of life, and readiness to seek help. The educator concentrated on a few of the patient's problems as identified by the ASI, negotiated a plan for behavioral change, and provided a handout listing treatment resources in the community. The educator was able to convey personal knowledge about the community programs and mention particular people for patients to contact, having visited the organizations as part of his or her training. Ten days after the motivational interview, the educators telephoned patients to review the action plan, ask what happened, and provide additional referrals, if necessary. These calls reached less than a third of patients (31 percent).

Participants assigned to the control group received written advice—"based on your screening responses, you would benefit from help with drug abuse"—along with the handout listing treatment resources. They were not given a motivational interview, and those who expressed interest in the treatment programs were merely encouraged to call a number from the handout. No followup call was attempted with these patients.

Results at Six Months

All participants, both the intervention group and controls, were given appointments to return to the clinic for followup 6 months after their original assessments. The team's research assistants tracked down no-shows by using the clinic's appointment system and visiting shelters and sites frequented by drug abusers. Altogether, they reached 962 (82 percent) of the 1,175 participants. Ultimately, 184 of these patients were excluded from the data analysis, either because hair samples taken at study entry did not confirm their initial reports of drug abuse, or because they did not give samples at followup.

Among the remaining 778 (66 percent of the original sample), 22.3 percent of those who had participated in the motivational interview had been abstinent from cocaine for at least 30 days at the time of the followup interview, compared with 16.9 percent of those who had received just the referral list. The motivational intervention was associated with superior abstinence rates among the subgroups of participants who abused opiates (40.2 percent versus 30.6 percent) and both cocaine and opiates (17.4 percent versus 12.8 percent). These differences occurred even though patients in the motivational interview group had more severe medical and drug-related problems and reported more psychiatric conditions at the beginning of the study.

| <i>Demographic Characteristics of 1,175 Study Participants</i> | |
|--|----------|
| Characteristic | % |
| Female | 29 |
| Race | |
| African-American | 62 |
| Hispanic | 23 |
| White | 14 |
| Born in the United States | 82 |
| Homeless | 46 |

| | |
|---|----|
| Reported psychiatric problems | 24 |
| Education less than high school | 38 |
| Employed | 17 |
| Had health insurance coverage | 66 |
| Never participated in substance abuse treatment | 54 |
| <i>The research team worked with outpatients seeking routine medical care at Boston Medical Center walk-in clinics.</i> | |

About 40 percent of patients in each group reported that they had participated in formal treatment with a health care professional during the 6 months between the initial assessment and followup. This similarity in rates of treatment suggests that the brief motivational encounter with the peer educator was beneficial in itself, and not because it prompted participants to seek therapy. Ninety percent of the patients who said they received professional help underwent detoxification but did not enter ongoing addiction therapy to prevent relapse, a finding the researchers attribute in part to lack of access. "During the study, our patients had very limited access to public methadone treatment, which many had requested," says Dr. Edward Bernstein.

About half the patients in each group who achieved abstinence cited the peer educator as a source of help. The investigators believe patients viewed these individuals as role models for abstinence, which may prompt some to reduce drug abuse even without a motivational interview. "Doctors and patients are not equal, especially when there are language, class, and culture differences. Add drug abuse to the mix, and you usually get 'shaming and shoulding,' which makes patients feel inferior and close down," says Dr. Judith Bernstein. Because of their combination of training and life experiences, peers seemed to inspire optimism about the prospect for recovery, even in patients who felt that others had given up on them. Other sources of support included family, mentioned by 50 percent of patients who achieved abstinence, and self-help groups (68 percent).

Peer Educators Welcomed

Clinic staff at the Boston Medical Center welcomed the study's structured effort to deal with drug abuse, which is a serious problem in the community. They appreciated the fact that the program fit unobtrusively into routine care. "Most doctors don't feel they have the time or training to deal with substance abuse and are happy to suggest that patients see the peer counselor," says Dr. Edward Bernstein. An emergency room physician, Dr. Bernstein plans next to implement and evaluate a peer counseling intervention at five emergency centers.

"It's promising to see reduced drug abuse among these vulnerable patients, many of whom were homeless and unemployed," says Dr. Dorynne Czechowicz of NIDA's Division of Clinical Neurosciences, Development and Behavioral Treatments. Previous studies have demonstrated that alcohol-addicted patients benefit from screening and brief motivational interviews in primary-care settings, but few investigations have involved drug abusers. "More research is needed, but these findings suggest that peer educators can play an important role in busy clinical environments and enhance outreach to abusers of cocaine, opiates, and perhaps other drugs," she says.

Source

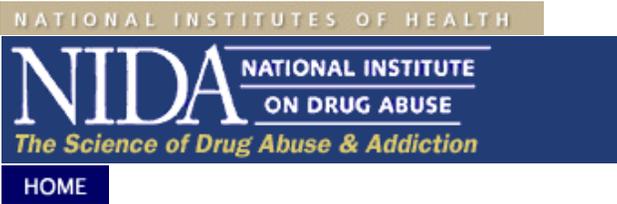
- Bernstein, J., et al. Brief motivational intervention at a clinic visit reduces cocaine and heroin use. *Drug and Alcohol Dependence* 77(1):49-59, 2005. [[Abstract](#)]

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Research Findings
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Telephone-Based Continuing Care Sustains Abstinence

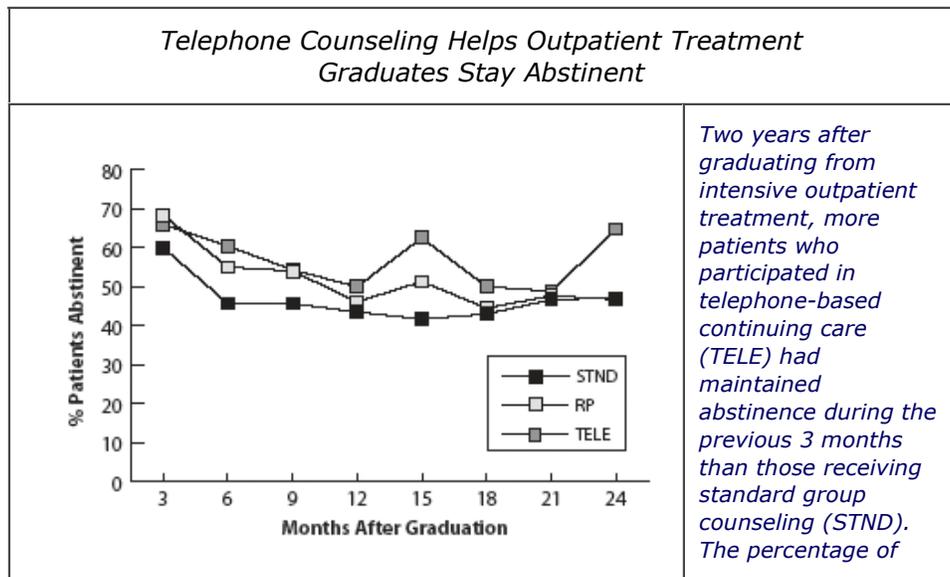
By Lori Whitten, *NIDA NOTES* Staff Writer

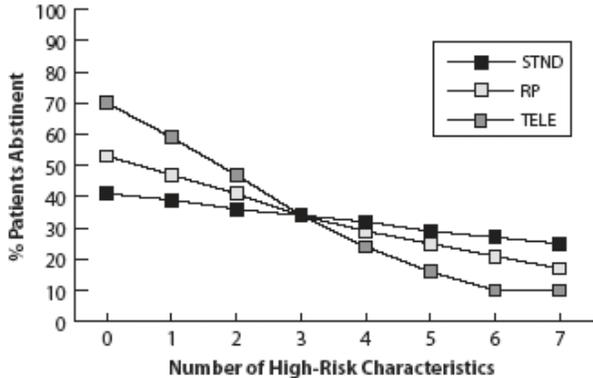
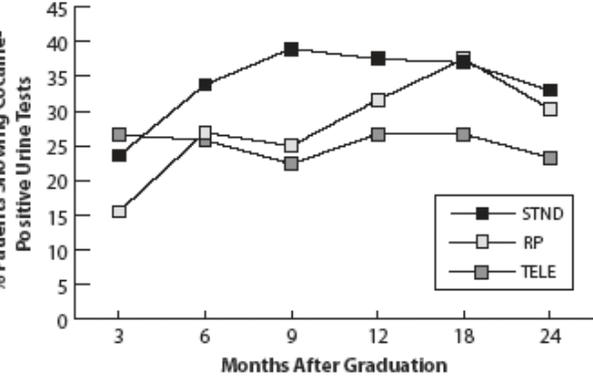
Telephone-based continuing care, in which an addiction counselor supports patient recovery with 15-minute calls once a week, can be as good as or better than face-to-face care at helping most patients maintain abstinence after intensive outpatient treatment (IOP). In a recent NIDA-funded study, the benefits of a telephone support protocol were evident nearly 2 years after the last call for all but the 20 percent of patients with severe addiction problems that did not resolve during IOP.

"Telephone-based continuing care does not require transportation or interfere much with work or childcare responsibilities, and this flexibility may help patients stay engaged in recovery and maintain the gains achieved during initial inpatient or outpatient treatment," says Dr. James McKay, lead researcher of the study.

Dr. McKay and colleagues at the University of Pennsylvania, the Treatment Research Institute in Philadelphia, and Brandeis University worked with two Philadelphia-area outpatient addiction programs. Patients seeking treatment in these programs received about 9 hours of outpatient group therapy each week for 1 month, on average. The therapy concentrated on overcoming denial of substance abuse, learning about the addiction process and cues to relapse, and beginning self-help participation. Dr. McKay and colleagues recruited patients who "graduated" from therapy—that is, continued in the IOP and achieved abstinence in the last week—to receive 12 weeks of continuing care and followup for 2 years.

The patients, 359 men and women aged 18 to 65, were typical, in terms of demographics and problem severity, of individuals seeking treatment at publicly funded outpatient addiction programs. Half met the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition* (DSM-IV) criteria for co-occurring cocaine and alcohol dependence, 87 were dependent on cocaine only, and 91 were alcoholic. Thirty percent had met the criteria for a diagnosis of major depression at some time in their lives. When they began treatment, they reported 8 years of cocaine and 18 years of alcohol abuse, on average, and multiple attempts to quit.



| | <p><i>abstinent patients did not differ between TELE and relapse prevention (RP) continuing care.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------|----------|----------|---|----|----|----|---|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|----|----|----|---|----|----|----|---|
|  <p>This line graph plots the percentage of patients who remained abstinent against the number of high-risk characteristics (0 to 7). Three groups are compared: STND (Standard Treatment, solid line with black squares), RP (Relapse Prevention, dashed line with white squares), and TELE (Telephone-based counseling, solid line with gray squares). All groups show a downward trend as the number of high-risk characteristics increases. The TELE group consistently shows the lowest percentage of abstinent patients, while STND and RP show similar, higher percentages.</p> <table border="1"> <caption>Approximate data for % Patients Abstinent</caption> <thead> <tr> <th>Number of High-Risk Characteristics</th> <th>STND (%)</th> <th>RP (%)</th> <th>TELE (%)</th> </tr> </thead> <tbody> <tr><td>0</td><td>42</td><td>53</td><td>70</td></tr> <tr><td>1</td><td>39</td><td>48</td><td>60</td></tr> <tr><td>2</td><td>37</td><td>42</td><td>48</td></tr> <tr><td>3</td><td>35</td><td>35</td><td>35</td></tr> <tr><td>4</td><td>33</td><td>28</td><td>32</td></tr> <tr><td>5</td><td>30</td><td>25</td><td>18</td></tr> <tr><td>6</td><td>28</td><td>22</td><td>12</td></tr> <tr><td>7</td><td>25</td><td>18</td><td>10</td></tr> </tbody> </table> | Number of High-Risk Characteristics | STND (%) | RP (%) | TELE (%) | 0 | 42 | 53 | 70 | 1 | 39 | 48 | 60 | 2 | 37 | 42 | 48 | 3 | 35 | 35 | 35 | 4 | 33 | 28 | 32 | 5 | 30 | 25 | 18 | 6 | 28 | 22 | 12 | 7 | 25 | 18 | 10 | <p><i>Throughout the study, patients with four or more characteristics reflecting severe addiction were better able to maintain abstinence if they participated in STND compared with TELE.</i></p> |
| Number of High-Risk Characteristics | STND (%) | RP (%) | TELE (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 42 | 53 | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 39 | 48 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 37 | 42 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 35 | 35 | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 33 | 28 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 30 | 25 | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 28 | 22 | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 25 | 18 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  <p>This line graph plots the percentage of patients with cocaine-positive urine tests over time (3 to 24 months after graduation). Three groups are compared: STND (solid line with black squares), RP (dashed line with white squares), and TELE (solid line with gray squares). The STND group shows the highest percentage of positive tests, peaking at 9 months. The RP and TELE groups show lower percentages, with RP peaking at 12 months and TELE showing a similar trend to STND but at a lower level.</p> <table border="1"> <caption>Approximate data for % Patients Showing Cocaine-Positive Urine Tests</caption> <thead> <tr> <th>Months After Graduation</th> <th>STND (%)</th> <th>RP (%)</th> <th>TELE (%)</th> </tr> </thead> <tbody> <tr><td>3</td><td>24</td><td>16</td><td>27</td></tr> <tr><td>6</td><td>34</td><td>27</td><td>27</td></tr> <tr><td>9</td><td>39</td><td>25</td><td>23</td></tr> <tr><td>12</td><td>38</td><td>32</td><td>27</td></tr> <tr><td>18</td><td>37</td><td>37</td><td>27</td></tr> <tr><td>24</td><td>33</td><td>30</td><td>24</td></tr> </tbody> </table> | Months After Graduation | STND (%) | RP (%) | TELE (%) | 3 | 24 | 16 | 27 | 6 | 34 | 27 | 27 | 9 | 39 | 25 | 23 | 12 | 38 | 32 | 27 | 18 | 37 | 37 | 27 | 24 | 33 | 30 | 24 | <p><i>The percentage of cocaine-positive urine samples did not increase as quickly during the followup for TELE patients as it did for those who participated in RP, with a similar trend for TELE compared with STND.</i></p> | | | | | | | | |
| Months After Graduation | STND (%) | RP (%) | TELE (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 24 | 16 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 34 | 27 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 39 | 25 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 38 | 32 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 37 | 37 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 33 | 30 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

All patients participated in 12 weeks of continuing care after completing a month of intensive outpatient treatment, and reported outcomes every 3 months during the 2-year followup.

Regular Contact With a Therapist Is Crucial

The investigators randomly assigned each patient to one of three continuing care therapies: a face-to-face therapy, either standard group (STND) or relapse prevention (RP); or telephone-based (TELE) counseling. In STND care, the most common approach to continuing care for addiction, 122 patients attended twice-weekly counseling sessions that emphasized overcoming denial and engaging in mutual and self-help activities. In RP therapy, 135 patients attended an individual session of cognitive-behavioral therapy and then group sessions once a week. In this approach, patients identify situations that prompt substance abuse and work to improve coping responses using structured activities and homework exercises.

In TELE care, 102 patients met with counselors in person the week before beginning the telephone phase to discuss the therapy and receive a workbook with exercises that structured subsequent calls. At a scheduled time each week, they telephoned counselors and talked for 15 to 20 minutes about progress during the previous week, any episodes of substance abuse, participation in self-help and other pro-recovery activities, plans for achieving the next week's goals, and any concerns. Counselors contacted patients who did not call and discussed in a supportive way their reasons for not doing so. To ease the transition from outpatient to continuing care, therapists offered the TELE patients group counseling once a week for a month. Patients struggling with relapse at that point could continue with group sessions; more than a third (35 percent) exercised this option.

The researchers followed up with patients every 3 months throughout the study and contacted 86 percent 2 years after graduation from IOP. At this point, about two-thirds of TELE patients reported abstinence during the previous 3 months,

compared with about half of those who had participated in STND. An analysis of urine samples from the cocaine-addicted patients showed an overall increase in the percentage of cocaine-positive samples during the followup period, but the increase was more rapid among RP participants than TELE participants. The TELE group had higher abstinence rates than STND throughout followup. Patients who participated in TELE maintained the gains of IOP even though they received about half as much therapeutic contact (428 minutes) as those receiving STND or RP (845 and 861 minutes, respectively).

"Continuing care benefits people in recovery in several ways, but regular contact with a therapist is crucial for patients with a chronic condition, and especially helps patients who have relapsed get back into treatment," says Dr. Dorynne Czechowicz of NIDA's Division of Clinical Neurosciences, Development and Behavioral Treatments. Although larger studies with more diverse patients are needed, Dr. McKay and his colleagues laid important groundwork, she says.

Face-to-Face Care for Severe Problems

Some patients need more contact with a counselor than telephone-based continuing care affords to maintain recovery. To identify these patients, Dr. McKay and his colleagues examined the link between outcomes and seven patient characteristics: co-occurring addiction to alcohol and cocaine at the beginning of IOP; any alcohol use, any abuse of cocaine, minimal attendance at self-help meetings, below-average social support during IOP; and a lack of commitment to complete abstinence, and low self-efficacy for recovery at the end of IOP.

Patients who demonstrated three or fewer of the characteristics—about 80 percent of the study population—did at least as well with TELE continuing care as with the other two approaches. But the remaining patients, those who met the criteria for co-occurring addiction at the beginning of treatment and did not achieve the main goals of IOP—abstinence from cocaine and alcohol during treatment, commitment to abstinence, and participation in self-help programs—were at high risk for relapse and showed better outcomes with STND continuing care, relative to TELE, during most of the followup. The findings suggest that TELE may be inappropriate for patients with more severe addiction problems until they demonstrate stable abstinence from drugs and alcohol, says Dr. McKay.

Flexible Continuing Care

"Some practitioners are developing flexible arrangements to engage and retain more patients in continuing care," says Dr. McKay. Flexibility in the practical sense—the ability to call one's counselor from any location—extends participation in continuing care, not only to busy people, but also to those living in rural areas or who have lost driver's licenses.

Telephone-based care is one way that a treatment intervention can respond to each patient's progress during recovery; it gives counselors the flexibility to intensify care if the patient is struggling to maintain abstinence. "Clinicians managing other chronic disorders—for example, hypertension and cancer—are using progress during initial treatment to determine subsequent care. It's not a new therapeutic approach, but it is novel to addiction treatment," Dr. McKay says.

Sources

- McKay, J.R.; Lynch, K.G.; Shepard, D.S.; and Pettinati, H.M. The effectiveness of telephone-based continuing care for alcohol and cocaine dependence. *Archives of General Psychiatry* 62(2):199-207, 2005. [\[Abstract\]](#)
- McKay, J.R., et al. Do patient characteristics and initial progress in treatment moderate the effectiveness of telephone-based continuing care for substance use disorders? *Addiction* 100(2):216-226, 2005. [\[Abstract\]](#)

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