Letters from readers are welcome. They will be published at the editor's discretion as space permits and will be subject to editing. They should not exceed 500 words with no more than three authors and five references and should include the writer's telephone and fax numbers and e-mail address. Letters related to material published in *Psychiatric Services* will be sent to the authors for possible reply. Send letters to John A. Talbott, M.D., Editor, *Psychiatric Services*, American Psychiatric Association, 1400 K Street, N.W., Washington, D.C. 20005; fax, 202-682-6189; e-mail, psjournal@psych.org.

A Critique of the Effectiveness of Assertive Community Treatment

To the Editor: In "Moving Assertive Community Treatment Into Standard Practice" in the June issue (1), the authors asserted that research has shown that this type of program is effective in reducing hospitalization and is more satisfactory to consumers and no more expensive than standard care. I disagree.

First of all, it is amazing that after 30 years of research the only justification for all the political and professional activity undertaken to implement assertive community treatment as the routine federally subsidized approach to the care of severely mentally ill persons is that it reduces hospitalization and is more satisfactory, but not less costly, than standard care. No one seems to find it problematic that assertive community treatment is no more effective than standard care in reducing symptoms or in improving the psychosocial functioning of patients, even though its inventors acknowledged that these were their aims.

As Dr. Test and her colleagues noted in 1985 (2), "We are well aware of the problems when hospitalization is used as a measure of outcome, and we look forward to the examination of our short-term (two-year) findings on other measures of psychosocial functioning." In an article published six years later, Dr. Test and her coauthors (3) stated, "Analyses of data related to additional outcome variables, including symptomatology . . . during the first two years are currently in progress and will be reported in future papers." However, Dr. Test's group has never published results of such outcomes, not even for the longest study of assertive community treatment ever conducted, which lasted for 14 years.

I have written extensive critiques of the effectiveness claims for assertive community treatment and have also pointed out some potentially harmful outcomes (4). All I can offer briefly here is evidence of the inaccuracy of the most important claim to effectiveness found consistently in the empirical literature on assertive community treatment—the claim that assertive community treatment reduces hospitalization. I have argued that reduced hospitalization is not the result of assertive community treatment but simply the tautological result of administrative decisions to treat all assertive community treatment patients in the community regardless of symptoms and their severity while patients in the control group are not subject to such a rule and are thus hospitalized frequently. If such an administrative rule were adopted for any other treatment approach, similar results would be obtained.

Test and Stein, the inventors of assertive community treatment, admitted this in 1978 (5): "Community treatment results in less time spent in the hospital. This finding is certainly not surprising since experimental patients were usually not admitted to hospitals initially and there were subsequent concentrated efforts to keep them out."

The fact is that most of the literature on assertive community treatment is written by experts on this approach, who may have something to gain by presenting this intervention less than objectively. Most of the outcome claims are taken at face value and are not subjected to close internal review to determine whether they are validly supported by the methods used. I would recommend further public discussion of these issues as well as others, such as the therapeutic value of the coercion on which assertive community treatment is based. Critical debate is the hallmark of scientific progress and should involve not just the promoters of assertive community treatment but also critics like myself before the field moves to implement this approach as one of the basic tools in the "toolkit" of the Evidence-Based Practices Project.

Tomi Gomory, Ph.D.

Dr. Gomory is assistant professor in the School of Social Work at Florida State University in Tallahassee.

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In Reply: Dr. Gomory's critique of the evidence for assertive community treatment described in the article by my coauthors and me correctly identifies limitations in findings on assertive community treatment. Certainly, consumers, clinicians, family members, and investigators have hoped that this approach to treatment could have a greater impact on symptoms and psychosocial functioning. The limitations have been recognized in previous reviews (1,2). What seems

puzzling in Dr. Gomory's response is his failure to recognize the straightforward reporting of study findings and to understand the steps taken over time to improve the model.

Assertive community treatment is one of the most intensively studied interventions for severe mental illness. Findings from 25 randomized clinical trials published over the past two decades have been extensively reported. The most recent review of assertive community treatment provided a new opportunity to summarize its outcomes, which were reported in terms of the percentage of trials with better outcomes for assertive community treatment, no difference, or worse outcomes (3). Although it is true that reduced psychiatric hospital use is the most powerful and consistent outcome, found in 74 percent of the studies, housing stability was better in 67 percent of the studies and worse in 8 percent. Quality of life was better in 58 percent, and greater client satisfaction was reported in 88 percent of the studies in which it was assessed. Weaker findings, in the range of 20 to 50 percent of studies, demonstrated the superiority of assertive community treatment for symptoms, social adjustment, arrests and incarceration, substance use, vocational functioning, and medication compliance.

Because the results of the 25 trials have presented both strong and weak evidence for the effectiveness of assertive community treatment across a range of outcomes, steps have been taken over the past two decades to address the imperfect evidence base. Weak findings have been used to inform further development of the model in many areas. Such developments include increased consumer participation on assertive community treatment teams, integrated substance abuse treatment for persons with serious mental illness, more effective strategies for social and vocational rehabilitation, use of recent psychopharmacological breakthroughs to reduce symptoms and side effects, addition of a systematic approach to family psychoeducation, and development and use of fidelity measures to monitor quality and improve implementation of assertive community treatment. These clinical and rehabilitation advances have been incorporated to refine an already complex and comprehensive model. The development of such refinements represents a rich response to the less robust findings, and there is little doubt that assertive community treatment will continue to evolve with further field experience and research.

In fact, the findings reported in the 25 studies are probably conservative. The challenges to conducting research on comprehensive interventions for complicated and persisting clinical conditions in public-sector settings are many. Among the most notable threats to large-scale field-based studies are inadequate implementation of the treatment model and the study protocol; poor subject retention, especially in control conditions of usual care; policy changes that reduce resources for the experimental condition; improvements in community care that favorably influence outcomes for the control condition; limitations in outcome measures, such as sensitivity to change; and low base rates for some targeted outcomes. Such methodological problems have been acknowledged in published reports by investigators of assertive community treatment. Public-sector studies contrast sharply with the more typical university-based efficacy studies, which typically recruit small and homogeneous samples, are of shorter duration, measure fewer outcomes, and are supported by adequate resources. All of these features ensure greater control by investigators over most aspects of the study protocol. The trade-offs necessary to achieve external validity in field-based trials may dampen the findings, but they also increase confidence in the results that are obtained.

Despite limitations in the evidence, assertive community treatment remains the best empirically validated model for a selected group of adults with severe mental illness. Assertive community treatment is evolving, and it will continue to incorporate modifications and innovations. However, treatment cannot stand still. People need and deserve the best treatment we have. In this vein, the assertive community treatment toolkit, used in conjunction with other toolkits, will provide an educational strategy for achieving an ambitious set of evidence-based practices for improved outcomes.

Barbara J. Burns, Ph.D.

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In Reply: Dr. Gomory disagrees with the evidence that assertive community treatment reduces hospitalization, is no more expensive than traditional care, and receives higher client satisfaction ratings. He claims that evaluators of this approach have been biased advocates of assertive community treatment and that they have administratively prevented hospitalization—even, he implies, when it might be necessary—to present assertive community treatment in a favorable light. On the basis of our personal experience, we disagree with Dr. Gomory.

In 1987 we and our colleagues in the Veterans Affairs health care system initiated the largest multisite experimental study of assertive community treatment yet undertaken. More than 800 veterans volunteered to participate in the evaluation, which involved a two-year follow-up period. At the time we were neither experts in nor advocates for assertive community treatment, but we had been asked by VA administrators to conduct a field trial to test its potential value in our health care system. Our study showed reduced hospital use, cost savings, greater consumer satisfaction, and, in the long term,

less severe symptoms and better community functioning (1). As program evaluators, neither we nor the clinicians involved in the study had administrative control over hospital admission decisions.

Since then our data and the entire assertive community treatment literature have been subject to review and debate by top VA health care administrators, who, as managers of a general health care system, have no bias in favor of any treatment other than those that are effective and efficient. After several years of review the VA Undersecretary for Health issued Directive 2000-034, which encouraged the use of this model across the VA system on the basis of the scientific evidence in its favor.

Let us not exaggerate. Assertive community treatment is not a panacea, and it takes skill and effort to implement it well. The same is true of brain or heart surgery and treatment of serious illnesses, from asthma to Zollinger-Ellison syndrome. The greater cost-effectiveness of assertive community treatment relative to standard care in appropriate populations is modest in magnitude and has not been demonstrated in every study. Implementing assertive community treatment is hard work. But after 20 years it is clear that it is a forward step that deserves to be taken when appropriate. We must not let the perfect be the enemy of the good.

Robert Rosenheck, M.D.
Michael S. Neale, Ph.D.

Dr. Rosenheck, who is a coauthor of the article on assertive community treatment in the June issue, is director of the Veterans Affairs Northeast Program Evaluation Center in West Haven, Connecticut, where Dr. Neale is associate director. Dr. Rosenheck is also professor of psychiatry and public health at Yale Medical School.

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In Reply: As codevelopers of the assertive community treatment model, we believe it is important to clarify several issues raised by Dr. Gomory in his letter, in which he contends that it is premature to move assertive community treatment into standard practice as discussed in the article by Ms. Phillips and her colleagues. These authors asked us if we wished to respond to the letter from Dr. Gomory.

Dr. Gomory calls for further discussion of issues such as "the therapeutic value of the coercion on which assertive community treatment is based." The assertive community treatment approach never was, and is not now, based on coercion. Quite the opposite is the case. We developed assertive community treatment in the 1970s on the basis of our belief that persons suffering from even very disabling mental illnesses can live freely in the community and experience a satisfying quality of life if they receive adequate supports and assistance (1). Other community treatment efforts at that time were failing because the system was highly fragmented and providers demanded that even very ill clients visit offices or program settings to receive services.

Assertive community treatment focused on service delivery mechanisms such as a single integrated team and use of outreach to deliver services, supports, and rehabilitation to maximize the possibility that even the most disabled consumers would remain in the community and have a decent quality of life. Our own conclusion from the literature, when we consider the most rigorous studies and the programs that have high fidelity to the model, is that assertive community treatment is successful in reaching these goals. The willingness to deliver services to clients should not be equated with coercion. Coercion is not part of the model, and if programs that call themselves assertive community treatment programs appear to be using coercion, they should be closely scrutinized and modified.

Meanwhile, we believe it is fair to say that many of our earlier efforts were overly paternalistic. Although we differed with many in that era in that we espoused the rights and abilities of persons with severe mental illness to live in the community—indeed, in the same settings as other citizens (2), we shared the prevailing view that staff "knew best" what clients needed. Hence our treatment plans were typically staff derived. Fortunately, the courageous voices of consumers, along with years of experience, have led us to see the enormous strengths of persons with mental illness. The assertive community treatment model has evolved into one of ongoing collaboration with consumers in making and reviewing decisions about goals and methods. The model will continue to improve only when we work in partnership with consumers.

Dr. Gomory also points to the shortage of evidence about the effects of assertive community treatment beyond the well-documented reductions in hospitalization, and he accurately notes that we have not yet published data on psychosocial outcomes from a long-term study of assertive community treatment whose early (two-year) findings on hospitalization were reported in 1991 (3). Progress on this study for a number of years was substantially slowed, partly because of the need for the principal investigator (MAT) to assume family caregiving responsibilities and also by the need to devote all resources to the continued collection of the long-term data. Data analyses and writing are now our primary focus, and readers can be assured that all dimensions of the findings will be published as soon as this work is completed.

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Internet Addiction Disorder Among Clients of a Virtual Clinic

As the Internet increasingly becomes part of our lives, Internet addiction disorder has received much attention. Internet addicts may withdraw from social and interpersonal interactions other than those on the Internet. Their family relationships and academic or occupational functioning may deteriorate. Several withdrawal symptoms have been identified, including nervousness, agitation, and aggression, as well as an addiction syndrome that includes the presence of withdrawal symptoms, increasing tolerance, and loss of control (1). A high rate of comorbid mental disorders has also been reported, especially depressive symptoms and social impairment (2,3).

We report the results of a survey to determine the prevalence of Internet addiction disorder among visitors to a virtual mental health clinic where 100 volunteer mental health professionals provide, at no charge, online answers to visitors' questions about mental problems (4). We hypothesized that visitors who had a comorbid mental health problem would have a higher risk of developing Internet addiction disorder.

The survey was conducted from May to October 2000. During the study period all visitors to the virtual clinic completed Young's Internet addiction disorder questionnaire, a brief seven-item instrument that adapts *DSM-IV* criteria for pathological gambling (5). A total of 251 clients completed the questionnaire. The mean±SD age of the clients was 25.04±6.19 years, with a range of 14 to 44 years. Most were female (67 percent) and single (84 percent). Most had an education beyond the college level (63 percent), and about a third (36 percent) were students. A majority (56 percent) reported that they had never visited a real mental health clinic.

On the basis of the questions visitors asked, the most common impending diagnosis was anxiety disorder (29 percent), followed by mood disorder (24 percent). The survey responses indicated that 26 percent had an impending substance use disorder. Among the 251 clients, 38 (15 percent) met criteria for Internet addiction disorder. Clients who met the criteria did not differ significantly from those who did not in age, gender, education, marital status, occupation, or impending diagnosis. However, the rate of comorbid substance use disorder was significantly higher among clients who met the criteria for Internet addiction disorder than among those who did not (58 percent versus 26 percent; Fisher's exact test, two-tailed, p=.03).

Our survey is the first to document the prevalence of Internet addiction disorder among visitors to a virtual mental health clinic. The high prevalence we found needs attention. Few of the survey respondents raised the issue of Internet addiction as a problem in their subsequent interactions with the online mental health professionals, although some reported many failed attempts to cut down on their time spent online, and some reported feeling depressed, nervous, and agitated when they were not online. Either these persons did not recognize the problem or they did not know how to ask for help. Their addiction to the Internet may complicate their existing mental problems (1). They may benefit from a clinician's actively inquiring about their Internet use and providing them with education to help them gain insight into problematic use.

The high prevalence of comorbid substance use disorders, nearly 60 percent, also needs attention. This finding is compatible with those of previous studies. Shapira and colleagues (4) reported that 60 percent of the 20 persons in their sample who had Internet addiction disorder also had a substance use disorder. Young (5) reported a rate of 52 percent among 396 subjects.

Activities on the Internet may lead to dopamine release in the nucleus accumbens, which is thought to be an important neurochemical event in the development of addiction. People who lack self-esteem are more likely to become Internet addicts, just as they are more likely to use drugs or alcohol (1). It is essential to gain a better understanding of underlying factors in Internet addiction disorder, including how personality traits, family dynamics, psychosocial factors, and communication skills influence the way people use the Internet.

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