The Iowa Department of Public Health Gambling Treatment Services: Four Years of Evidence

Howard J. Shaffer
Richard A. LaBrie
Debi A. LaPlante
Rachel C. Kidman

Harvard Medical School
Division on Addictions

Co-Author of the Practice Guidelines Appendix
David A. Korn
University of Toronto

Technical Report #101102-200
October 25, 2002

Please direct all correspondence to Dr. Howard J. Shaffer, Division on Addictions, Harvard Medical School, 350 Longwood Avenue, Suite 200, Boston, Massachusetts 02115. In addition, once final, copies of this report will be available from the Division on Addictions' website (www.hms.harvard.edu/doa). Once connected to the homepage, click on the library and archives link to access and download a pdf file. You must have Adobe Acrobat reader to view this report.

Table of Contents

Table of Figures

Table of Tables

Executive Summary

The first principle of medical ethics is to do no harm. This maxim exists because the best of intentions can lead to treatment efforts that inadvertently and unintentionally stimulate adverse consequences. A similar and equally simple premise dictates the need for program evaluation: despite the best of intentions, unless research evaluates a program, we do not know whether it is producing positive, neutral, or negative results. This technical report summarizes the development, implementation and results of an evaluation of the Iowa Gambling Treatment Program (IGTP).

The IGTP amassed participant data for gamblers and concerned others of gamblers (e.g., family members, significant others, or close friends of problem gamblers) over four years (1997-2001). This data provided information about IGTP participants' background and demographic characteristics, financial status, gambling habits, mental health, and treatment services. Data collection opportunities included: (1) crisis contacts, (2) placement screening, (3) admission, (4) treatment services, (5) discharge, and (6) follow-up. The Harvard Medical School's Division on Addictions (DOA) assembled a research team that observed and corrected for a small number of inconsistencies in the data provided by the IGTP. The small number of errors in the complete data set indicates that there was a high level of quality control applied to the information before it reached the DOA team.

The evaluation conducted by the DOA team revealed a number of important findings:

Crisis Events and the IGTP

►The average number of crisis contacts in a given month increased over the duration of the IGTP evaluation period; however there was substantial seasonal variability in monthly accumulations of crisis contacts. On average, contacts peaked in January and declined through December.

►Like crisis contacts, gambling Annual Gross Revenue (AGR) increased over the duration of the IGTP evaluation period. Overall, both gross revenue and treatment program participants increased during the study period. However, during the early years, a comparison with crisis contacts suggested that as AGR increased, crisis contacts decreased and vice versa. AGR patterns likely reflect statewide gambling trends of both pathological and non-pathological gambling and crisis contact patterns might reflect the subsequent development of gambling problems among the most vulnerable gamblers. The size of IGTP participants' debt and small number of IGTP participants relative to monthly gambling AGRs suggest that it would be virtually impossible for IGTP participants' to influence AGR in any meaningful way.

►Counties more exposed to gambling venues were associated with higher population adjusted rates of crisis contacts.

►Although the number of monthly crisis contacts increased over the duration of the IGTP evaluation period, the average length of crisis intervention services actually diminished over time. In other words, as contacts increased, time spent addressing these individual contacts decreased. This observation might stem, in part, from the increased demand for services on treatment providers; alternatively, counselors might simply have increased their efficacy over time. Interestingly, 57% of interventions resulted in referrals to GA and 33% to debt management. This observation suggests that clinicians still view self-directed change and regulation to be central to managing gambling related problems.

►Anonymous contacts get less crisis intervention time than those contacts who reveal their identity in part or fully.

IGTP Participants

►Compared with Iowans in general, gamblers seeking services were more likely to be male, older, single, less educated, and unemployed; further, gambling assistance seekers were more likely to be employed in sales and services than their counterparts who did not seek gambling treatment.

►At admission, IGTP gamblers held approximately $14,000 (median = $4,060) in gambling debt and lost about $522 weekly. Seven-

teen percent of treatment seekers had a history of GA participation and 23% reported a history of treatment for substance use disorders. Treatment seekers primarily either came to the IGTP through the helpline (36%) or were self directed (28%).

►IGTP gamblers reported that various games disproportionately accounted for their losses. For example, treatment seekers reported that slots accounted for 58% of their losses, video poker for another 10%, casino table games were associated with 14% of losses and no other game accounted for more than a small fraction of losses.

►At admission, there were some differences between gamblers who experienced single versus multiple treatment episodes: although these groups were not distinguished by financial losses, the multiple admissions were generally more disordered as evidenced by more lifetime arrests and more previous treatment for gambling and substance abuse.

►Gender distinguished treatment seekers on important characteristics that relate to treatment:

▪Women started gambling later and went more quickly into treatment than their male counterparts.

▪Women treatment seekers were less likely to be single and more likely to be a parent compared with men.

▪Women were less likely to have a criminal history.

▪Women lost more money on slots and less money on casino games than male treatment seekers.

▪Women were less likely to report substance abuse and alcohol use but more likely to report being compulsive about food and shopping.

►Reporting a history of treatment for gambling was an important differentiating factor:

▪People with previous gambling treatment had more gambling-related debt, more declared bankruptcy, lost more jobs, and were more likely to have attended GA than those treatment seekers without prior gambling treatment experience. Multiple treatment experiences, then, were associated with a variety of socio-economic problems and efforts to regulate gambling. It is difficult, however, to determine whether an increase in the frequency or severity of problems stimulates more treatment episodes or whether more treatment experience encourages people to subscribe to more treatment.

►Reporting a concerned other involved in treatment was an important differentiating factor:

▪IGTP participants who reported that a concerned other was involved in their treatment were less likely to be single, but more likely to be a parent and employed.

▪IGTP participants who reported that a concerned other was involved in their treatment had higher incomes and more total debt, but not more gambling debt.

▪IGTP participants who reported that a concerned other was involved in their treatment had less delinquency and reported lower values of the most money lost in a week than did other gamblers.

Patterns of Treatment

►Women in treatment received a greater percentage of individual and group counseling than males, as did people with previous treatment compared to first time treatment participants.

►Overall, only 12% of those treated participated in family counseling. The two most frequent patterns of treatment types were individual plus group (49%) and individual only (32%).

►Those with concerned other(s) involved in their gambling treatment received the highest percentage of family counseling; however, the percentage of treatment seekers with concerned others who received family counseling was relatively small. On average, only 39% of those with a concerned other involved participated in a treatment program that contained any kind of family counseling.

Follow-up

►Only 9% of all gamblers admitted to the IGTP had follow-up records. This small group of follow-ups is likely not representative of the

entire treatment cohort. This sample precludes confident generalization of the follow-up findings to the four years of the IGTP.

►Among those who did complete the IGTP, in the period between discharge and six-month follow-up, 74% of treatment completers, 49% of partial treatment completers, and 36% of others were abstaining from gambling.

►From admission to follow-up, among the small sample followed, 85% of treatment completers, 88% of partial treatment completers and 65% of others significantly reduced their dollars lost per week.

Implications for Practice

In sum, this evaluation provided the opportunity to describe and examine several aspects of the IGTP. The IGTP evaluation is a major first step towards the development of best practices for IGTP practitioners. The results of this evaluation provide unique insight into those areas of practice that are most relevant for Iowa practitioners. This insight permits an evidence-base for developing best treatment practices. Doing so will allow clinicians and others working in the IGTP to augment their expertise with information directly relevant to delivering care to Iowans with gambling-related problems. It is likely that these insights will be instructive for practitioners in other areas of the country as well. Ideally, practice guidelines will provide a conceptual map for IGTP clinicians to deliver clinical services through the entire sequence of clinical events that are associated with gambling treatment.

Acknowledgements

A project of this magnitude requires the cooperation and collaboration of many people. We extend thanks to Clare Bruff-Graves, Christine Reilly, Christine Thurmond, Gabriel Caro, Laura van der Leeden, and Lymari Graciano. We extend special thanks to Frank Biagioli, Janet Zwick, Linda Holt, Mary Crawford and the many treatment providers and clients of the Iowa Gambling Treatment Program. The hard work of the staff across many different treatment sites and the willingness of clients who bravely sought treatment collectively provided us with the opportunity to begin the complex process of achieving a better understanding of gambling treatment.

Developing practice guidelines is a daunting task. Limited resources that necessarily restrict the scope of work complicate this effort by forcing us to make difficult choices. Clearly, this report represents a starting point and cannot be all things to all clinicians. For the shortcomings of this work, we accept responsibility. However, many people have contributed to the development of the practice guidelines that comprise Appendix E. In particular, we want to extend special thanks to Kathleen Scanlan for her help, support and thoughtful comments. In addition, we want to thank Laura van der Leeden, Christopher Freed and Marlene Warner for their comments and contributions to earlier drafts of these guidelines. We also want to extend a very special thanks to Harvey Skinner for his thoughtful guidance and many contributions to the shape, form and content of these guidelines.

About the Authors

Howard J. Shaffer is an Associate Professor at Harvard Medical School and the Director of the Division on Addictions at Harvard Medical School. He recently served as principal or co-principal investigator on five government or foundation sponsored research projects: (1) Addiction Training Center of New England; (2) The Harvard Project on Gambling and Health (3) Estimating the Prevalence of Disordered Gambling in the United States and Canada; and recently completed projects on (4) A Science Education and Drug Abuse Partnership project, "Advancing Science Through Substance Abuse Education; and (5) a randomized clinical trial comparing Hatha yoga with psychodynamic treatment as an adjunct to methadone therapy for narcotic dependence. His newest project is the recently established Institute for Research on Pathological Gambling and Related Disorders.

In addition to an active private practice, Dr. Shaffer consults internationally to a variety of organizations in business, education, human services, and government. Dr. Shaffer is a clinical psychologist licensed in the Commonwealth of

Massachusetts. The National Register of Health Care Providers in Psychology also certifies him.

Dr. Shaffer is founding director of the Norman E. Zinberg Center for Addiction Studies at Harvard Medical School and the Department of Psychiatry at the Cambridge Hospital. Dr. Shaffer also is the founder and President of the Board of Trustees of the American Academy of Health Care Providers in the Addictive Disorders. The Academy represents the first international credentialing body for clinicians working in the addictive disorders.

Dr. Shaffer served on the National Academy of Sciences, National Research Council, Committee on the Social and Economic Impacts of Pathological Gambling in 1998-1999. His professional appointments also have included consultation to the National Institutes of Health, The National Cancer Institute, The National Council on Marijuana and Health, The Icelandic Ministry of Health & Social Security, The Massachusetts Council on Compulsive Gambling, and The Massachusetts Departments of Mental and Public Health. For five years, Dr. Shaffer served as chair of the education committee for The Cambridge Hospital department of psychiatry. For two years, he served as a senior scientist at the National Technical Center for Substance Abuse Needs Assessment. Dr. Shaffer also served as the chief psychologist at the North Charles Institute for the Addictions for 13 years. He served as the Director of Drug Problems Resource Center at The Cambridge Hospital; he was Director of the Special Consultation and Treatment Program for Women at the Judge Gould Institute of Human Resources.

Currently, Dr. Shaffer is the editor of The *Journal of Gambling Studies*. He serves as an Associate Editor of the *Journal of Substance Abuse Treatment*. Dr. Shaffer also is a member of the editorial boards for the *Journal of Psychoactive Drugs*, *Advances in Alcohol and Substance Abuse, Psychology of Addictive Behaviors, and Sexual Addiction and Compulsivity: The Journal of Prevention and Treatment*. Dr. Shaffer serves as a reviewer for the *New England Journal of Medicine*.

Dr. Shaffer's major research interests include, the social perception of addiction and disease, the philosophy of science, impulse control regulation and compulsive behaviors, adolescent gambling, addiction treatment outcome, and the natural history of addictive behaviors. Dr. Shaffer has written extensively about the treatment of addictive behaviors and the nature of addiction, including more than 120 chapters, journal articles, and reviews. He also has published more than 120 newspaper articles and 6 books. His books include *Quitting Cocaine: The Struggle Against Impulse* with Dr. Stephanie Jones, *Compulsive Gambling: Theory, Research & Practice*, edited with Dr. Blase Gambino, Sharon Stein, and Thomas Cummings. His newest book, *Youth, Gambling, and Society: Futures at Stake*, from the University of Nevada Press is scheduled for release shortly. His research, writing, and teaching have shaped how the health care field conceptualizes and treats the full range of addictive behaviors.

Richard A. LaBrie is an Instructor in Psychiatry at Harvard Medical School and the Associate Director for Research and Data Analysis at Harvard Medical School's Division on Addictions. Dr. LaBrie began his statistical career in 1962 when he joined the staff at the Harvard Statistical Laboratory and enrolled in the statistical program at Harvard's Graduate School of Education. The Statistical Laboratory provided Harvard researchers with statistical consultation and computing services using the first commercial main-frame computer, the IBM 704, which Harvard leased from IBM. The Statistical Laboratory eventually evolved into the Harvard Computing Center and later the Office of Information Technology. The School of Education's statistical program pre-dated the University's Department of Statistics and was the center for education on applied statistics. During his graduate program, Dr. LaBrie studied with many prominent statisticians on the School of Education's faculty including Philip Rulon, John Carroll, William Cochran and Howard Mosteller.

Dr. LaBrie left the Harvard Computing Center to start his own consulting firm, LaBrie Associates Inc. where he served as President for the next 23 years. LaBrie Associates specialized in the study of psychopharmacology. Dr. LaBrie was a member of the research team that was among the first to establish the biochemical links

to mental illness. During this period, Dr. LaBrie worked on research projects in areas distinct from medical research. For example, he directed a study of the determinants of attrition among Army reservists that led to major changes in the management of reserve forces in all branches of the military.

Dr. LaBrie combined his background in psychopharmacology, statistics, artificial intelligence and computing to found and direct Drug Intake Management and Evaluation System, Inc. (DIMES), a computer aided medical information system for prescribing medications.

Dr. LaBrie rejoined Harvard in 1989 when he began working in AIDS prevention. He was Director of Research for a demonstration study of community based prevention among injection drug users (IDUs) and directed a longitudinal study of IDUs. He was then Deputy Director of the National Technical Center for Substance Abuse Needs Assessment. The center developed the instrumentation and research procedures to measure need for substance abuse treatment throughout the nation. The telephone questionnaire was used to interview more than a quarter of a million residents of US households. In addition to direct survey, Dr. LaBrie worked on national models of need for treatment using social indicators of substance dependence that have recently been published.

While they were both at the National Technical Center, Dr. LaBrie worked with Dr. Howard Shaffer on the research and development of the Massachusetts Adolescent Gambling Screen. Dr. LaBrie recently was able to renew his association with Dr. Shaffer by joining the faculty of the Division on Addictions.

Debi LaPlante currently is an Instructor in Psychiatry at the Harvard Medical School's Division on Addictions. She received her PhD in social psychology from Harvard University in 2001 under the advisement of Dr. Nalini Ambady. Her graduate research resulted in publications on interpersonal influence and communication in multiple settings, including doctor/patient and supervisor/subordinate interactions. She has also examined the impact of mental health on subtle communication skills.

At the Division on Addictions she has participated in several prominent research projects including: (1) developing the problem gambling self-help toolkit, *Your First Step to Change* in collaboration with the Massachusetts Department of Public Health and the Institute for Research on Pathological Gambling and Related Disorders, (2) developing a model of regional exposure to public health toxins, and (3) coauthoring a book chapter on the treatment of pathological gambling with Dr. Howard Shaffer. Dr. LaPlante also has consulted for Family Health Productions, Inc. in the development of an alcohol education video toolkit, *Alcohol: True Stories hosted by Matt Damon*.

Currently Dr. LaPlante is editor and a principal writer of the online research review, the *WAGER* (www.thewager.org). She also is a contributor to the online initiative, *Addictions and the Humanities* (www.hms.harvard.edu/doa/). Dr. LaPlante serves on the editorial board of the *Journal of Gambling Studies*. Her current research interests include addiction in special populations, including women and youth. Dr. LaPlante participates in the continuing medical education conference, *Treating the Addictions*, and lectures for the *Norman E. Zinberg Training Program in the Addictions*. In addition to her research interest in addiction, Dr. LaPlante continues to collaborate with several social psychologists on projects dealing with interpersonal influence and communication.

Rachel C. Kidman currently is a Research Assistant at the Division on Addictions at Harvard Medical School. During her time at Swarthmore College, Ms. Kidman gained valuable research experience through summer internships at the Wells National Research Reserve in Wells, ME and Jackson Laboratories in Bar Harbor, ME. After graduation, Ms. Kidman accepted a position as a Research Assistant in the Department of Community Medicine at Mount Sinai Medical School in New York. In this capacity, she designed and implemented research projects related to occupation health problems, including clinical trials for carpal tunnel syndrome, ergonomic interventions, and access to medical care for work-related disorders. Her primary focus was an evaluation of the experience of union garment workers diagnosed with

musculoskeletal disorders in the workers' compensation system, including the influence of various social factors on the likelihood of challenge and the subsequent impact on medical outcomes.

Ms. Kidman joined the Division as a research assistant and supports the Division's many research initiatives. She is a frequent contributor to the *WAGER*, a weekly gambling research bulletin published by the Division in collaboration with the Massachusetts Council on Compulsive Gambling. In addition, Ms. Kidman serves as editorial assistant for the *Journal of Gambling Studies* and is a contributor to the Division's Addictions and Humanities website, an initiative dedicated to exploring how the arts relate to addiction and substance abuse.

David A. Korn currently is an addiction specialist and public health physician. He is a member of the Department of Public Health Sciences, Faculty of Medicine at the University of Toronto, Canada, affiliate faculty at Harvard University and Principal of the consulting firm DAK STRATEGIES.

Dr. Korn serves on the International Advisory Boards of The American Academy of Health Care Providers in Addictive Disorders and External Advisory Committee, Health Services Management Program, Ryerson Polytechnic University, Toronto. He is a member of the Editorial Board, *Journal of Gambling Studies* and Board of Directors of the U.S. National Center for Responsible Gaming.

Recently, he was a visiting professor at Harvard Medical School's Division on Addictions. His research there related to the emerging area of gambling and its implications for the health of individuals, families and communities. In 2000, he published a monograph entitled Gambling and the Health of the Public: Adopting a Public Health Perspective, and in 2002, Gambling and Related Mental Disorders: A Public Health Analysis in the *Annual Review of Public Health*. Both publications were authored in collaboration with Howard Shaffer of Harvard Medical School.

His current gambling research projects include the role of Web-based technology for prevention of youth gambling, university athletics and gambling, and the impact of gambling on ethno-cultural families. The first evidence based treatment guidelines for clinicians dealing with gambling problems is in the final stage of development.

Dr. Korn is a medical school graduate of the University of Western Ontario in London, Ontario, Canada. Early in his career he pursued graduate studies in international health at the London School of Hygiene and Tropical Medicine in England, graduating cum laude. His international experience included serving as a medical clinician in rural Zambia and as an epidemiologist for the World Health Organization Global Smallpox Eradication Program in Ethiopia. He is an elected Fellow of the Royal Society of Tropical Medicine.

1 Introduction

Many different conceptual frames can describe gambling. Observers, for example, have considered gambling from moral, psychological, mathematical, behavioral, cognitive, biological and, more recently, neurophysiological perspectives. Each of these conceptual views rests primarily on an analysis of individual characteristics. Treatment outcome research typically focuses only on individual attributes associated with treatment. Recently, there has been growing interest in viewing gambling from a public health perspective (Korn, 2000; Korn & Shaffer, 1999a; Korn & Skinner, 2000; Shaffer & Korn, 2002; Skinner, 1999). This perspective encourages the examination of population based factors of health problems rather than individual attributes; a public health view focuses on the distribution and determinants of various phenomena among the population. For example, a public health approach to gambling encourages examining the societal risk and protective factors that encourage or discourage the transition from recreational to problem-related gambling, the identification of vulnerable demographic groups, or ethnic differences in the acceptance of gambling. In contrast, a more individuated research approach might emphasize psychobiological or cognitive factors that promote transitions from healthy to disordered gambling. One benefit of the public health approach is that it can provide insight into more wide scale health-related phenomena that might not be observable through more individuated research approaches.

Gambling behavior is dependent upon individual and environmental features. This suggests that, over the life course, one's gambling behavior and degree of pathology probably will vary. The decision to gamble, as well as other decisions, such as the decision to seek treatment, is subject to multiple internal and external factors. Fishbein and Ijzen's (1975) theory of reasoned action describes some of these components and subsequent revisions of the theory suggest that past behavior, attitudes, knowledge of social norms, and perceived self-control influence the behavioral choices we make by shaping our behavioral intentions. Consequently variations among any of these factors will change the likelihood of behavior.

Recent research has confirmed that for many individuals gambling disorders are not stable (Abbott, 2001; Shaffer & Hall, 2002). Many scientists have focused on internal events (e.g., coping skills, erroneous perceptions, stress, vulnerable personality characteristics, mental illness, or neurobiological defects) to explain individuals' gambling behaviors (Blanco, Ibanez, Saiz-Ruiz, Blanco-Jerez, & Nunes, 2000; Blaszczynski & Steel, 1998; Breiter, Aharon, Kahneman, Dale, & Shizgal, 2001; Comings, 1998; Crockford & el-Guebaly, 1998b; Cunningham-Williams, Cottler, Compton, & Spitznagel, 1998; Cunningham-Williams, Cottler, Compton, Spitznagel, & Ben-Abdallah, 2000; DeCaria, Begaz, & Hollander, 1998; Feigelman, Wallisch, & Lesieur, 1998; Galdston, 1951; Jacobs, 1989; Ladouceur, Sylvain, Boutin, & Doucet, 2002; Ladouceur, Sylvain, Letarte, Giroux, & Jacques, 1998; Langenbucher, Bavly, Labouvie, Sanjuan, & Martin, 2001; Petry, 2000b; Shaffer & Korn, 2002). But, the environment also has the potential to impact our choices. Consequently, other scientists have focused on social setting or ecological factors such as exposure and availability as prime suspects in increasing individuals' tendencies to engage in potentially addictive behaviors such as gambling or drinking. Volberg, for example, recently suggested that increasing access to gambling in the United Kingdom also would increase the incidence of problem gamblers: "…the number of opportunities to wager in a specified period of time—is tied to the development of gambling problems" (Volberg, 2000, p. 1556).

This idea is consistent with the exposure model which implies that the object of addiction causes addictive behavior. Exposure models suggest that the presence of environmental toxins (e.g., gaming settings) increase the likelihood of related disorders (e.g., pathological gambling). An expanded exposure model purports that gamblers' vulnerable or resilient characteristics also play a role in determining the consequences of gambling exposure. For example, exposure to gambling or intoxicant use will adversely impact only those who have an underly-

ing vulnerability, but not those who are sufficiently resilient (e.g., Jacobs, 1989; Khantzian, 1975, 1985, 1997). In Iowa, the exposure model suggests that more treatment seekers will reside in areas closest to gambling opportunities in general and casinos in particular.

Alternatively, the social adaptation model suggests that gamblers—or people who are exposed to or use intoxicants—are dynamic and capable of changing their behavior in response to exposure (Shaffer, Hall, & Vander Bilt, 1997a; Shaffer & Zinberg, 1985; Zinberg, 1974, 1975; Zinberg & Fraser, 1979; Zinberg & Shaffer, 1985; Zinberg & Shaffer, 1990). The social adaptation model includes the idea that novelty often stimulates new interest in social activities, but participants eventually adapt to novelty and the effects of these new activities are therefore limited. For many, this process often results in unexpected social change. That is, the early increases in new patterns of intoxicant use or gambling—whether with or without adverse consequences—are typically followed by an adaptive process that leads to lower levels of involvement or abstinence. Social adaptation can result from a weakening of the novelty effect, increases in adverse consequences, the emergence of competing interests, or a combination of these factors—even among some people who evidence fundamental vulnerabilities (e.g., Miller, 2000; Shaffer & Jones, 1989). To illustrate, in nineteenth century France, fascination with absinthe[1] use increased and then diminished despite widespread exposure and little public policy pressure to stop (Arnold, 1989; Vogt & Montagne, 1982). Shifts in the social perception of absinthe from an attractive and chic aperitif to an intoxicant that caused absinthism, with its associated adverse effects, stimulated social adaptation that limited its widespread use (Vogt & Montagne, 1982).

According to empirical evidence, Iowa has significantly less exposure to gambling when compared with states like Nevada, New Jersey or Colorado (Shaffer, LaBrie, & LaPlante, 2002). Within Iowa there is variation to gambling exposure and this makes it possible to test the relationship between gambling exposure and treatment seeking. It is reasonable, for example, to hypothesize that increased exposure to gambling in regions of Iowa that are more proximate to gambling venues will be associated with increased use of the IGTP. If increased exposure leads to higher levels of gambling involvement and this activity in turn is associated with an increased incidence of gambling related problems among new gamblers, then we can expect that people with greater exposure will disproportionately seek the services of the IGTP. It also follows that relapse rates will be higher among those people who have used the IGTP but live in areas that have high levels of exposure to gambling.

1.1 Treatment and Outcome Evaluation

Why is it important to study and evaluate treatment outcomes? The first principle of medical ethics is to do no harm. This maxim exists because the best of intentions can lead to treatment efforts that inadvertently and unintentionally stimulate adverse consequences. A similar and equally simple premise dictates the need for program evaluation: despite the best of intentions, unless a program is evaluated, we do not know whether it is producing positive, neutral, or negative results. It is easy to assume that the outcome of the Iowa Gambling Treatment Program will be obvious and straightforward—that it will help problem gamblers to recover and improve the lives of "concerned others." Anecdotal information often supports the value of treatment programs. However, we must ask, "When does a pound of anecdote yield an ounce of truth?"

Unfortunately, treatment reality seldom reveals itself in a straightforward manner. In fact,

[1] Absinthe is a psycho-stimulant "…drink [that] was enormously popular in the late 19th century, particularly in France. French soldiers fighting in the Algerian conflicts of the 1840's had spiked their wine with wormwood extract (ostensibly to ward off fevers), and on their return to France their acquired taste was satisfied by absinthe, which contained a variety of essential oils including that of wormwood. Absinthe's popularity with the soldiers spread among their compatriots from all walks of life: some of the most creative people of the time were its devotees. Absinthe was said to evoke new views, different experiences and unique feelings" (Arnold, 1989, p. 112).

treatment programs can a) have no effect; b) change knowledge about problem gambling but not gambling behaviors; c) decrease problem gambling as planned; d) inadvertently increase problem gambling; or e) have a range of other outcomes (Shaffer, Hall, & Vander Bilt, 1997b). To the surprise of administrators, evaluation research too often reveals that programs have outcomes quite different from those that program developers intended. Since Iowa has invested heavily in the Gambling Treatment Program, and many people depend upon this program to help them recover from problem gambling, it is critical that the clinical efficacy of the program be evaluated.

This situation is complicated by the fact that gambling treatments are relatively new; few treatments have been studied scientifically (Shaffer & LaPlante, in press). Given the increasing access to gambling during that latter half of the 20th century (Shaffer & Korn, 2002), public health researchers, clinicians, and policy makers have had both the opportunity and social obligation to study the impact of legalized gambling on adults as well as children and adolescents. As the popularity of legalized gambling continues to grow, society is directing more attention toward the public health risks and the economic, legal and social costs of expanded gambling (e.g., Korn & Shaffer, 1999b). Despite this increasing attention and public health concern, there is a notable absence of treatment related research that can provide information about how people recover from gambling disorders or how comorbid psychiatric conditions causally interact with gambling problems and recovery from gambling problems (Eber & Shaffer, 2000; National Research Council, 1999). With few gambling treatment programs available throughout North America, and the lack of treatment outcome studies, the place to begin studying the epidemiology and natural history of gambling disorders is to examine how people who have received a variety of treatment interventions and those who have not differ in both their psychopathology and their recovery experiences. Since there are few scientific studies of gambling treatment outcome (e.g., Ladouceur et al., 1998; Sartin, 1988; Seager, 1970) and no studies of gambling treatment impact,[2] a broad examination of this issue is warranted.

By evaluating the Iowa Gambling Treatment Program (IGTP) and its outcomes, public health officials gain the opportunity to inform scientists, clinicians and public policy makers about the precise nature of problem gambling, the utilization and impact of treatment resources, and the efficacy of the treatments that currently are available.

1.2 Treatment Outcome Research Issues

The very idea of a "treatment outcome" is complex. Treatment outcomes represent constructs that must be operationally defined with great care—and these definitions must be multidimensional. For example, what influence do we attribute to client adherence to treatment protocols when we assess the influence of treatment? When evaluating treatment outcomes, are we limited to the client outcomes obtained at discharge or can we measure treatment outcomes many months later? In some instances, there are important short-term outcomes due to treatment experiences; however, it also is possible that treatment outcomes emerge more slowly and might not appear until 12 – 24 months after treatment. The opposite also is true: short-term treatment outcomes observed at discharge can wane rapidly and clients with addiction often slip or relapse within 12 months. Complicating matters, treatment outcomes are associated with the severity of client illness at intake so that it is not easy to determine whether the outcome is due to treatment or the nature of the problem.

New research demonstrates a variety of other problems associated with treatment outcome

[2] While treatment efficacy is an index of a treatment's relative capacity to produce a positive outcome among those individuals who experience it, treatment impact refers to two major factors: (1) how many people a treatment attracts; and (2) of those it attracts, how effective it is in producing a positive outcome. Thus, impact = treatment participation × treatment efficacy. For example, a treatment that attracts only 100 people into a program and is 30% effective has only half the impact of a treatment that attracts 600 people into treatment and is 10% effective.

research. For example, in the substance abuse treatment outcome literature, there is inconsistent reporting of (1) demographics, (2) drug use, (3) study characteristics, and (4) outcome and follow-up information (Ellingstad, Sobell, Sobell, & Planthara, 2002). In particular, this body of research is weak with respect to follow-up procedures and information. New treatment programs are particularly vulnerable to the absence of follow-up information even if they show interest in collecting such data; it takes time for a treatment cohort to mature sufficiently to examine the long-term impact of clinical experiences.

1.3 The Role of the Program Evaluator

Given the importance of treatment evaluation, it is also essential to consider the evaluators' relationship with the material that they examine. The Iowa Department of Public Health could have performed their own internal review of its Gambling Treatment Program, yet they elected to conduct a review by outside consultants. This decision carries significance. The shift in perspective from an internal reviewer to an outside party yields unique objectivity, which can prevent unintentional bias when examining the data. Accompanying this objectivity is detachment from the outcome. An impartial evaluator is more likely to accept any unexpected results that a more invested evaluator might unintentionally distort. Alternatively, an independent party with a fresh perspective might notice trends or conclusions that an internal reviewer might miss because of familiarity with the data and expectations about its value.

As the third party in this analysis, the Division on Addictions at Harvard Medical School brings these important elements to our independent review of the data. As we progress through various analyses and dissections of the data in this project, our objectivity affords us the privilege of original observation that can enhance our treatment of the data.

2 Methods

2.1 Program Description: The Iowa Gambling Treatment Program

2.1.1 Treatment Protocols

The Iowa Gambling Treatment Program (IGTP) is a network of local service providers which hold contracts with the Iowa Department of Public Health to create an outpatient program providing a variety of diagnostic and primary gambling treatment services. The following is an overview of the program adapted from the Iowa Department of Public Health administrative rules for the Gambling Treatment Program and from the Gambling Treatment Reporting System (GTRS) Manual (Appendix A).

The IGTP provides services to the entire community, including problem gamblers, family members, and concerned persons. The IGTP defines "problem gambling" as a pattern of gambling behavior which may compromise, disrupt or damage family, personal or vocational pursuits. Problem gambling includes, but is not limited to, the diagnostic criteria for pathological gambling in the current American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders. "Concerned person" means a person affected by problem gambling behavior and needing services or a person willing to get involved in the treatment of a person who gambles excessively. The concerned person can be either a relative or non-relative of the person who gambles excessively.

The IGTP established a toll-free telephone line (1-800-BETS OFF) to provide callers affected by problem gambling behavior with information and referral to local gambling treatment and education services. The helpline provides statewide 24-hour telephone information and referral. The program maintains a directory of services for persons who gamble excessively and for concerned persons. The helpline provider is independent of the providers contracting with the department to provide gambling treatment services.

For many recipients of IGTP services, their initial contact is a request for help in a crisis situation. Crisis services involve either a face-to-face meeting or a telephone contact where a counselor is responding to a crisis situation resulting from problem gambling behavior. Each service provider is responsible for managing crisis calls and contacts with 24-hour access to service, on-call service, or alternative service provision (for example, having staff on call to answer phone calls and guide people to the help they need; having individuals access a phone message which directs them to call the provider at scheduled hours of service or to call an emergency number to handle people during off hours). To encourage participation, the IGTP provides services to people who wish to remain anonymous. A client, either a person gambling excessively or a concerned person affected by problem gambling behavior, is eligible for outpatient services if the person is a resident of Iowa and an assessment identifies a need for gambling treatment services.

An assessment is completed within five working days of initial contact or service initiation. A person gambling excessively is determined in need of gambling treatment services if the person meets the criteria from any one of the following three assessment tools: the South Oaks Gambling Screen (SOGS), the Gamblers Anonymous (GA) 20 Questions, or the diagnostic criteria for pathological gambling in the current American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*. If the client is a concerned person and not a problem gambler, he/she may be admitted as a client to address life issues resulting from the problem gambling behavior of a family member/significant other. A concerned person qualifies for gambling treatment services if either of the following applied: the person gambling excessively, and whose behavior is affecting the concerned person, meets the criteria from any of the above three assessment tools or the concerned person meets the criteria of the Gam-Anon 20 Questions.

During the intake and assessment process, the following client information is obtained: name, address, telephone number, demographic information which includes date of birth, sex, race or ethnicity, sufficient identification of the referral source, presenting problem, gambling history which includes type, amount, frequency and duration of gambling activity, legal history which describes any involvement with the criminal justice system, medical and health history, psychological history and mental status, family history, educational history, employment history, and any other relevant information which will assist in formulating an initial assessment of the client is collected. The client is also informed of the general nature and goals of the program, the rules governing client conduct and infractions that can lead to discharge from the program, confidentiality laws, rules and regulations and treatment costs to be borne by the client. The client is responsible for paying the costs of individual and group counseling services provided in an outpatient program. Charges to the client by the provider are based on a sliding fee schedule, which was developed based on Iowa Department of Public Health guidelines. Subject to the availability of appropriated or designated funds, the director of the Iowa DPH may enter into written agreements with a facility to pay for the cost of treatment of a client unable to pay.

Based upon the initial assessment, a comprehensive treatment plan is developed as soon as clinically feasible after the client's admission to the outpatient program, but no later than ten days following admission. The treatment plan includes a clear and concise statement of the client's current strengths and needs as well as the short-term and long-term goals the client will be attempting to achieve. Also included are the type and frequency of therapeutic activities (services) in which the client will be participating, the staff persons to be responsible for the client's treatment, and the specific criteria to be met for successful completion of treatment and an anticipated timetable. Treatment plans are developed in partnership with the client and written in a manner readily understandable to the average client. They are reviewed by the primary counselor and the client, as well as by the treatment supervisor, every two months or as events impacting on progress occur, whichever is sooner.

Counseling services are provided to clients in an individual or group setting. The purpose of

the counseling session is to allow exploration of areas identified in the treatment plan related directly or indirectly to problem gambling. Individual counseling is a counseling session addressing issues related to the client's individuated treatment plan. Family counseling is a counseling session that includes the client and one or more concerned persons. Group counseling is a counseling session where two or more admitted clients are present, with the counselor. The admitted client may be a problem gambler or concerned person.

A client's progress and current status in meeting the goals set in the treatment plan, as well as efforts by staff members to help the client achieve these stated goals, is recorded in the client's case record. Information is noted following each individual counseling session and a summary of group counseling services is documented at least weekly when a client receives group counseling services. There are written policies and procedures governing the compilation, storage and dissemination of individual client case records to ensure that the provider exercises its responsibility for safeguarding and protecting the client case record against loss, tampering, or unauthorized disclosure of information.

Continuing care plans are developed in partnership with the clients who have completed primary treatment. Continuing care counseling is provided in order to address relapse issues and to support and increase the gains made in the treatment process. Continuing care individual counseling is a counseling session that includes only a counselor and a client who has completed primary treatment. Continuing care group counseling is a counseling session within a group setting that includes a client who has completed primary treatment. Both individual and group sessions are for a specific period of structured therapeutic involvement and are designed to enhance, facilitate and promote transition from primary care to ongoing recovery.

The IGTP requires six-month follow-up interviews for gamblers who completed all or the majority of treatment. Follow-up interviews with clients discharged for other reasons are optional. A staff member contacts the client, either by telephone or by mail, to determine the status of the individual.

2.1.2 Data Collection

The Department of Public Health in Iowa collected the data for this project from July 1997 to June 2001. Every gambling treatment facility in Iowa recorded information from every treatment seeker and then transferred this information to the Gambling Treatment Reporting System (GTRS). This is a computerized client-based reporting system that collects data aggregated by month. Treatment seekers and recipients provide information on three different basic forms: (1) the Crisis Contact/Admission/Placement Screening Form, (2) the Services Form, and (3) the Discharge/Follow-up Form (Appendix B). When a client has any contact with a gambling treatment service facility in Iowa, one of these forms is filled out with the appropriate information in accordance with the GTRS Manual (Appendix A). Each treatment program sends the paper version of the form to the central Iowa Gambling Treatment Program where the data is entered into the computerized system. The paper copies are then returned to the originating facilities. Each individual treatment facility in Iowa is responsible for collecting and entering accurate data, and there are data checks that identify common data entry errors.

2.1.3 Summary of Forms

The Crisis Contact/Admission/Placement Screening form is used to establish client records, define client characteristics and define the problem. When a gambler or concerned person receives a crisis contact, placement screening, or admission, this form is used. For a crisis contact, only the first 12 fields are required to be entered. Multiple crisis contacts within the same month are aggregated for the month and recorded on one service form. New placement screening can be entered if a one-month break in service has occurred. If a client is not admitted and comes in for treatment, this constitutes an admission and the form must be completed.

The Service Form is used to report crisis, screening, admission, treatment and follow-up services. The total number of service minutes and sessions provided to the client during a sin-

gle month are aggregated and recorded on the monthly form.

The Discharge/Follow-Up form is completed when a gambler or a concerned person is discharged and again at a six month follow-up for clients completing treatment and not readmitted during those six months. It defines post-service client characteristic data and is used to evaluate program performance.

2.2 Data Quality and Correction

As stated above, the IGTP was responsible for data collection and collation. The Gambling Treatment Reporting System (GTRS) includes error detection and correction procedures to enhance the quality of the data entered into the system. Assuring a high quality research data base requires another level of data inspection that goes beyond assessments at the level of data recording and data entry; an inspection of the data for errors and inconsistencies across data sets and time also is required. We developed the second-layer quality control procedures and tested them on the IGTP FY99 sample dataset. We applied its inspection procedures to the complete study dataset received midway through February 2002. The combination of the GTRS and our data evaluations will yield an information base of high quality.

2.2.1 Crisis Intervention Records

The crisis intervention form required information about the eight basic identification fields: (1) Program, (2) Client Number, (3) Primary Facility, (4) Date of Activity, (5) Type of Client (gambler or concerned other), (6) Original Invoice Number, (7) Final Invoice Number, and (8) Waiting Time, and four other personal demographics: (1) Birth Date, (2) Age, (3) County, and (4) Gender. Most crisis intervention records completed only the required fields. The analyses of the crisis intervention records revealed only a handful of older records that needed to be changed to accommodate changes in a few coding rules that occurred over time (see Appendix C). The crisis intervention information is a "contact" data base. The analysis of this limited information made an important contribution to our study of temporal and seasonal variations in treatment-seeking behavior.

2.2.2 Admission/Placement Screening Form

As mentioned above, the development of an unbiased baseline (admission) data set used both the records from the Admission and Placement Screening forms from identified clients. At the record level, quality control procedures identified a few admission records with missing or out-of-range birth dates. These entries were recoded to blanks (see Appendix C) and corrected after the collated data base was available. The placement screening data was very accurate. One record had an unrecognized code for the frequency of illicit drugs use. The entry was corrected to an allowable code. Other inconsistencies between these two information sources were identified during the process of collating records and identifying first and subsequent treatment episodes, and are discussed in that section of the report.

2.2.3 Services Delivered

The information on monthly services provided was relatively free of errors in the final data set. We found only a few records that needed correction out of the total of 18,803 records we received. The service records are monthly accumulations of services provided identified by number of sessions and total length of sessions. Consequently, the information is free from the complexity of questions and the resulting burden on the respondent and the interviewer that was associated with the admissions data. The services delivered information also is processed by several people on its way to entry in the data system, including the service provider's billing office. No doubt these extra stations along the way contributed to greater accuracy.

Some service records (10) were eliminated for lack of information. A few other records were missing either the number of sessions or the amount of time. However, recourse to other service records for the same person in other months permitted confident estimation of the missing information. These changes are detailed in Appendix C.

An examination of average session length identified five records with shorter than expected sessions (i.e., five minutes or less). There were also 23 records with unexpectedly long average session lengths of three hours or more. However, these unusual sessions could not be considered in error. In a corpus of nearly 19,000 records of months of service, it would not be unreasonable that occasionally a long treatment session is necessary, nor would it be unreasonable for an ongoing intervention to include a brief daily call to remind someone to avoid a setting or circumstance likely to trigger a problem. We did not make changes to these unusual services.

The services data set contained 47 people who received services as both types of clients, concerned others and gamblers. When we could reasonably determine the correct type of client from an examination of the individual services records and information from other data sets, we recoded all services to match this type. For three clients, the data was insufficient to make a determination of the correct type and they were not altered. Appendix C provides a detailed summary of the changes that were made.

2.2.4 Discharge

The discharge and follow-up data sets employ a common form. Perhaps as a result of this overlap, when we examined the discharge information on gamblers (i.e., 1,700 records) we found six discharge records that contained information not required for the discharge form. The information probably was accurate but not expected in this data set. The inappropriate information was eliminated. There was one record in which the program and facility codes were interchanged.

The discharge information contained items common to the admissions and placement information. We applied our data integrity analyses to identify inconsistencies among the several measures in each of the areas of income, arrests, debts, gambling history, and wagering activities. In most cases, inconsistencies were resolved by eliminating the conflicting information. We also followed the decision rules developed for the admissions data to resolve inconsistencies in the discharge information. Appendix C provides a detailed summary of data quality improvements to the discharge information.

2.2.5 Follow-up

The follow-up information used a data collection form common to the both discharge and follow-up interviews. We applied our data integrity analyses to identify inconsistencies among the several measures in each of the areas of income, arrests, debts, gambling history, and wagering activities. In most cases, inconsistencies were resolved by eliminating the conflicting information. We also followed the decision rules developed for the admissions data to resolve inconsistencies in the discharge information. Among the 494 follow-up records, there were five without identification that had to be eliminated. A few participants had inconsistent responses to total debt and its components and occasionally the individual income exceeded the family income and adjustments were made to the family income to agree with the larger, individual income reported. Appendix C provides a detailed summary of data quality improvements to the follow-up information.

2.2.6 General Data Quality

The small number of errors in the complete data set indicates that there was a high level of quality control applied to the information before it reached us. Our evaluation of more complex interrelations among items revealed additional inconsistencies. The combined attention to data entry and reporting problems by the IGTP and our secondary evaluation of complex interrelations produced an analytic data base of high quality and integrity. The IGTP very capably managed the extensive data collected from a large number of reporting agencies. Many of the data checks applied to the data by us could be incorporated into the IGTP's interview and data entry procedures to further improve data quality.

3 Results

In each of the results sections that follow, we will present the outcome of various analyses that have been applied to the IGTP data. For ease of presentation, the results have been divided into

four categories: (1) Demand for Services, (2) Program Services Delivered, (3) Service Participants and (4) Service Post-Program Results. In the first section, we will analyze the crisis contact data in order to illustrate patterns of demand and their relationship to various ecological factors. In 'Program Services Delivered' we will examine the aggregated data set in order to describe the characteristics of the overall program. We will then examine the collated dataset to provide a description from the level of the individual IGTP participant. In the final section, 'Service Post-Program Results,' we will examine the information obtained at discharge and follow-up. Each section will be followed by a brief interpretive discussion of the findings. We will consider the meaning of these findings in a more comprehensive manner in the conclusion section.

3.1 Demand for Services

We chose crisis contacts as the best information to use in its descriptions of the functioning of the IGTP across programs, over time, geographically, and through the seasonal variation in demand for services. The crisis contact is often the first encounter a gambler or concerned other seeking help has with the IGTP. Crisis contacts are recorded independently of eventual admission status and people often chose to remain anonymous at this intervention phase. The IGTP procedure requires counselors to record crisis contacts for unique individuals only once every 3 months. Only 49% of the crisis contact records were assigned a unique identifier and only 51% gave their age or date of birth. However, all but three of the 5,092 crisis contacts reported their county of residence and all but five had gender reported or confidently inferred. Because most crisis contacts were anonymous, the same individuals could contact the IGTP several times under several names and receive multiple crisis contact records within a short period of time. Therefore, the number of crisis contact records may overestimate the number of different individuals who contact the IGTP.

Because the IGTP procedure requires individuals to have only one crisis contact record for three consecutive months the dataset may underestimate the total number of client contacts; one record may not equal one contact, but could represent multiple contacts.[3] However, the analysis of the services information, presented below, indicated that 80% of crisis services were for a single session which is consistent with the description of crisis contacts as the initial, and for some people, the only treatment delivered. Given that providers spent an average of 36 minutes to provide a crisis intervention service, this service is a major IGTP effort.

The following sections present the results of these analyses of crisis contact services and show the relationship between crisis contacts and gross casino revenues (excluding Indian Gaming facilities which are not required to file similar reports). In addition, we conducted an analysis of the relationship between exposure to gambling and demand for treatment. The information collected by the IGTP provides a unique opportunity to study the application of the Regional Exposure Model (Shaffer et al; submitted for publication) to demand for gambling treatment.

3.1.1 Crisis Contacts by Program

From July 1997 to June 2001 there were 5,092 crisis contacts. Of these, 63% were gamblers and 37% were concerned others. The Gateway Centers recorded the most contacts (38%), followed by the Gordon Recovery Centers (14%) and the Eastern Iowa Center for Problem Gambling, Inc. (13%). These IGTP service programs accounted for 65% of all crisis contacts. The fewest contacts were recorded by Ringgold County Recovery and Prairie Ridge, which provided services for only part of the evaluation period.

3.1.2 Crisis Contacts over Time

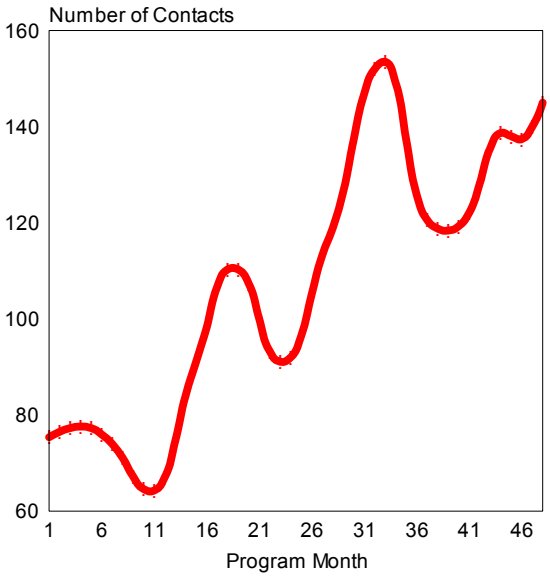
To explore the pattern of contacts over the duration of the IGTP, we summed the crisis contacts for each month of the IGTP. Figure 1 shows that the overall number of crisis contacts for the 48 months from July 1997 to June 2001. The number of crisis contacts increased

[3] After 3 months, a client may receive an additional crisis contact record.

significantly over time ($r=0.69$ $p<0.01$)[4]. The trend was similar for both gamblers ($r=0.61$ $p<0.01$) and concerned others ($r=0.73$ $p < 0.01$).

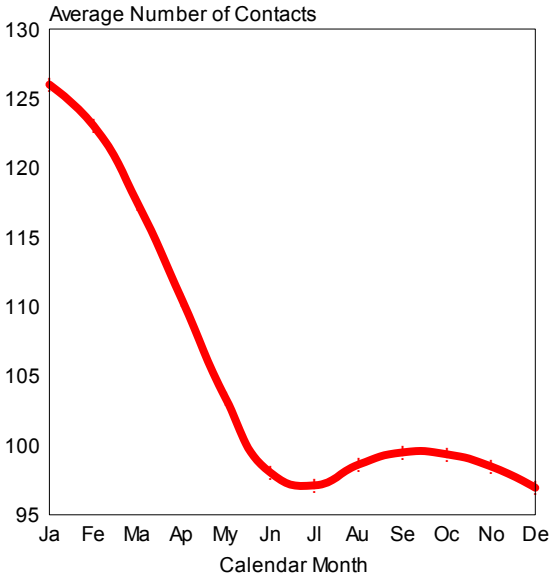
To examine the data for trends in crisis contacts over the calendar year, we averaged the total number of contacts for each of the twelve calendar months across years. Figure 2 shows a general decline in the average number of crisis contacts during the calendar year ($r= -0.63$, $p<0.05$). Similar trends were observed for both gamblers ($r= -0.54$, $p<0.1$) and concerned others ($r= -0.51$, $p<0.1$).

Figure 1 Crisis Contacts by IGTP Program Month



[4] For presentation purposes, variables depicted in all graphs were subjected to the SPSS "smoothing" procedure.

Figure 2 Crisis Contacts by Calendar Month



3.1.3 Crisis Contacts and Gambling Revenue

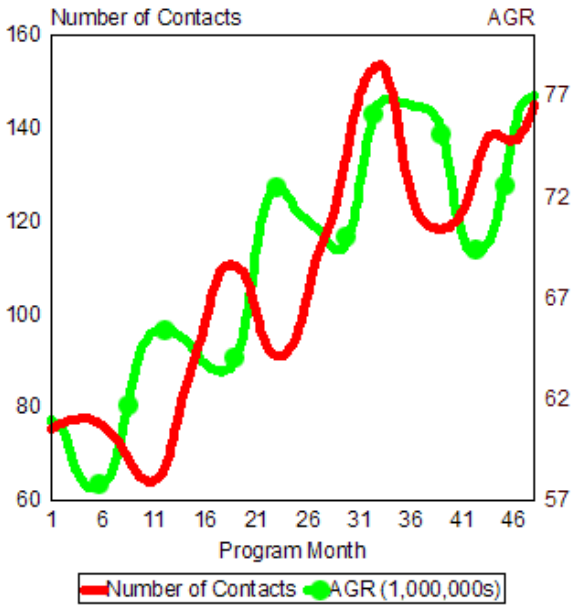
The next analyses relate crisis contacts to the State of Iowa's reported monthly gambling revenue. State licensed gambling venue revenue estimates for July 1997 through June 2001 were obtained online from the Iowa Racing and Gaming Commission (http://www3.state.ia.us/irgc/). The revenue analyses were limited to non-Indian gaming venues. Data was not available for Indian gaming venues because they are not subject to the same reporting requirements.

The relationships between crisis contacts and gambling revenues indicate the extent to which the measures respond similarly or differently to other factors. The analyses should not be interpreted to indicate that changes in the number of people seeking help for gambling problems are responsible for changes in casino revenues. The average monthly change up or down in casino gambling revenues was $4.8 million. The average change in crisis contacts was 22 people. The difference in scale precludes an observable causal relationship.

We explored two general patterns: (1) the relationship between Adjusted Gross Revenue (AGR) and IGTP months and (2) the relationship between AGR and crisis contacts during the calendar year.

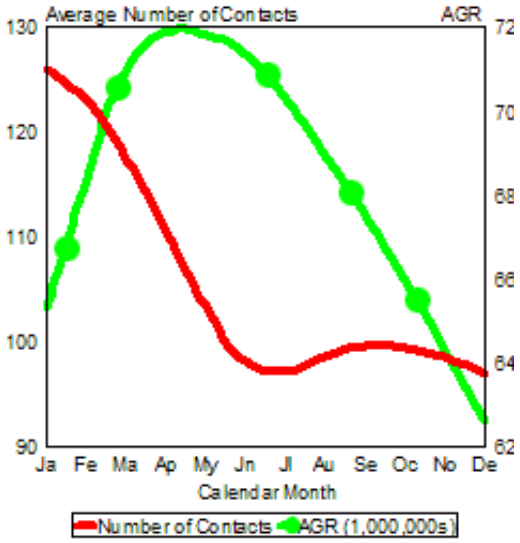
According to the Iowa Racing and Gaming Commission, AGR for a given month is the total amount wagered by venue patrons minus the total amount paid out to venue patrons. This is equivalent to patron losses. We compiled monthly AGR for each of the 48 study months. Figure 3 shows the significant positive relationship between AGR and program month ($r=0.79$, $p<0.01$). We also included the information on number of crisis contacts previously presented in Figure 1. These results also reveal a significant positive relationship between AGR and number of crisis contacts ($r=0.63$, $p<0.01$). The two smoothed lines have a similar pattern of oscillation about a general upward trend. However, the two measures appear to be slightly out of phase with increased contacts matched to decreased revenues and vice-versa.

Figure 3 Contacts - Casino Revenues by IGTP Program Month



The AGR aggregated for calendar months across years did not evidence a significant seasonal variation. Figure 4 shows the relationship between AGR and calendar year month ($r=-0.51$, $p<.1$). The figure also repeats the information on crisis contacts plotted in Figure 2. The AGR and number of crisis contacts aggregated by month were not related ($r=0.01$, $p>0.1$). The general trend of the IGTP was an increase in both AGR and crisis contacts over the 48 months, but the twelve-month seasonal variations in crisis contacts were not reflected in the AGR. The variance from month to month in AGR is relatively narrow compared to that of the crisis contacts. We would not expect the contribution of problem gamblers to AGR to be large enough to generate an observable change.

Figure 4 Contacts - Casino Revenues by Calendar Month



3.1.4 Crisis Contacts and IGTP Media Expenditures

We obtained IGTP media expenditures for July 1997 to June 2001 from the IGTP. However, the media expenditures do not directly relate to intensity of exposure. The timing of invoices primarily influences the pattern of media expenses. Because media campaigns vary according to start-up costs, public service contributions, type of media (i.e., billboards and radio advertisements have different half-lives) and many other parameters, we could not analyze the effect of media on the variations in crisis contacts confidently.

3.1.5 Crisis Contacts and Gambling Exposure

As mentioned in the introduction, many people believe that objects of addiction cause addiction; consequently, it is tempting to suggest that increased exposure to gambling must result in increases in problem and pathological gambling. Although researchers have related the increase

of gambling in one community to the construction of a casino (Ladouceur, Jacques, Ferland, & Giroux, 1999), well-designed studies demonstrating a link between the presence of gambling opportunities and an increase in problem gambling are scant. One reason for this might be a lack of basic conceptual strategies and research tools that will allow investigators to probe gambling and its impact on the public.

In response to the need for sensitive measures of exposure, we developed a theoretical model that permits the quantitative measurement of regional exposure to gambling. The strategic regional exposure model (REM) quantifies the gambling exposure that exists in a community, county, state or region. The REM yields a standardized exposure gradient, which researchers can use to test theoretical models, as well as examine the potential causes and consequences of exposure to social phenomena such as gambling. This model incorporates three primary exposure components: dose, potency, and duration. Dose is a measure of quantity (e.g., one shot of vodka or three casinos in the state). Potency is a measure of strength (e.g., 100-proof vodka or both racetracks and casinos within a state). Duration is a measure of time (e.g., elapsed years of legal drinking or gambling). The equation for determining the regional exposure gradient follows:

$$RE=a + b_1(f)D_1 + b_2(f)P_2 + b_3(f)T_3 + \ldots b_i(f)X_i + \text{error}$$

RE represents regional exposure, is a constant, D is standardized dose, P is standardized potency (i.e., strength of exposure), T is standardized duration (i.e., elapsed exposure) and Xi represents additional standardized environmental public health factors. Error can result from a number of sources, such as regional contiguity. Weights (b) for each component are variable and include the possibility that the component should be transposed (f) because the relationship between increasing exposure and gambling problems might be non-linear (e.g., quadratic or gradually increasing sine curve); these non-linear patterns suggest, for example, that adaptation might occur and gambling disorders are not strictly a function of exposure.

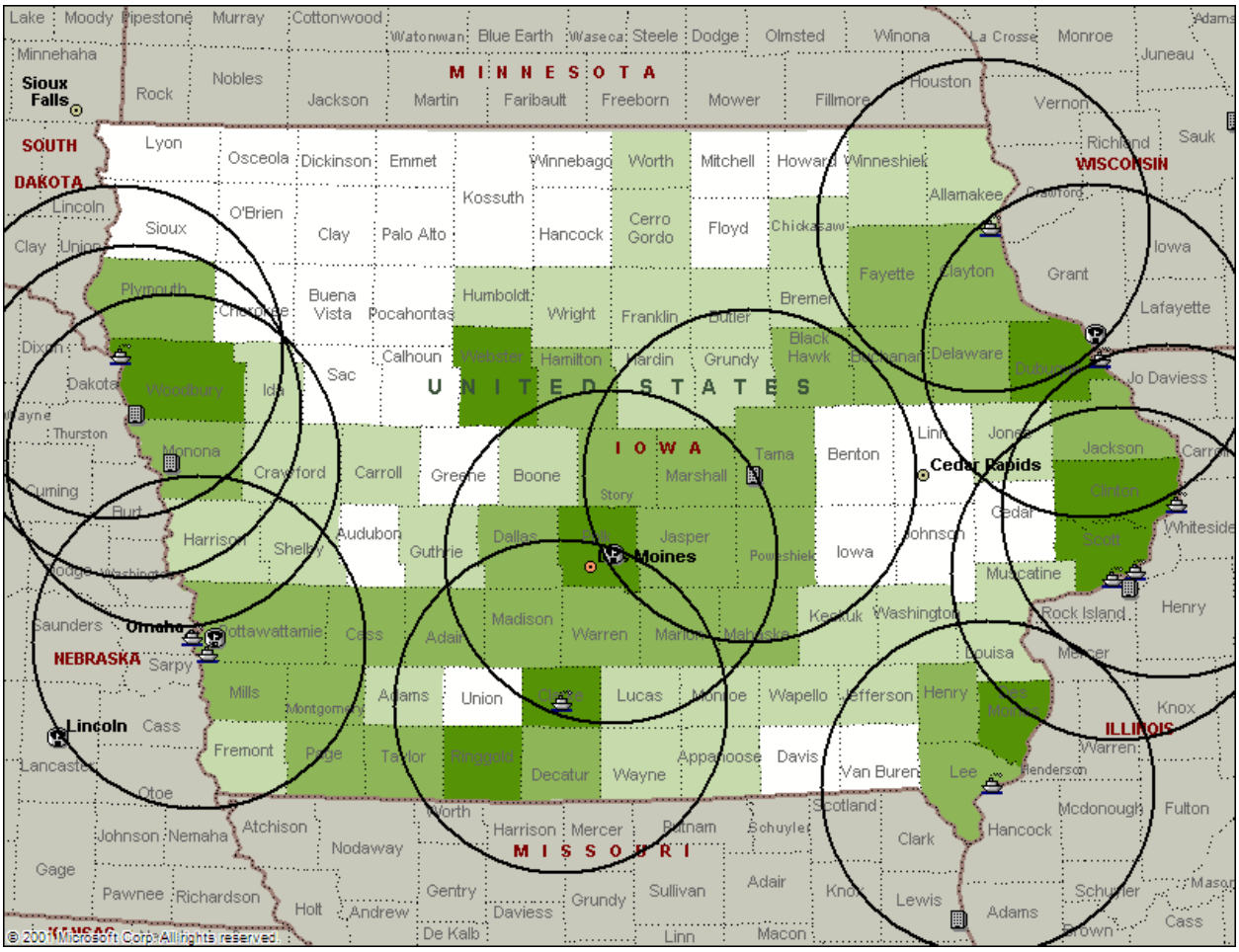
This device provides the framework that allows investigators to calculate an index of gambling exposure; permitting a more careful examination of the effect of gambling exposure on the health of the public. However, certain components of the REM preclude quantitative measurement. For example, we do not have detailed information about the three Iowan Indian casinos and Indian casinos are not subject to the same public reporting rules applicable to non-Indian casinos.

However, the IGTP Crisis Contact/ Placement/Admission dataset provides an interesting opportunity to visually explore the relationship between exposure to gambling and problem gambling in multiple communities. Information recorded at crisis contact included city and county of residence for about 99% of all crisis contact records (n=5023). There were 28 gamblers who gave a residence in a state other than Iowa (Nebraska = 17, South Dakota = 6, Wisconsin = 3, and Illinois = 2). Using this information, we examined the relationship between the level of gambling exposure and the quantity of crisis contact calls, controlling for population, in different geographic regions of Iowa (counties).

Figure 5 displays the level of crisis contacts by county—these are population adjusted—in shades of green and the location of casinos, racinos, and riverboat casinos in Iowa and surrounding states. We estimated that fifty miles is considered a reasonable travel distance for entertainment; this radius surrounds each venue as a rough indicator of regional gambling exposure.

Figure 5 illustrates the relationship between crisis contacts and exposure; areas of higher crisis contacts (illustrated by darker green) tend to cluster around gambling venues. For example, the northern region of Iowa, which is devoid of gambling establishments, had the lowest concentration of crisis contacts. Counties with the highest concentrations of crisis contacts (i.e., Woodbury, Dubuque, Polk and Ringgold Counties) were all located within 50 miles of at least one gambling establishment, and most were in areas of exposure to multiple venues. Counties within a 50 mile radius of casinos had a statistically significant higher rate of population adjusted crisis contacts than counties outside of a 50 mile radius from casinos ($t(95)=6.95$ $p<0.01$).

Figure 5 Crisis Contacts and Gambling Venues Mapped



3.1.6 Summary[5]

In their theory of reasoned action, Fishbein and Ajzen (1975) suggested that attitudes and knowledge of social norms indirectly affect what we do by influencing our behavioral intentions, which in turn directly affect our behavior. Research has since modified this theory by suggesting that our past behavior and our perceptions of behavioral self-control also influence our intentions to behave; further, our past behavior and attitudes, together with behavioral intentions, directly affect our behavior (Oh & Hsu, 2001).

[5] Portions of this discussion were adapted from The WAGER 7(36).

This suggests that any decisions, including the decision to seek treatment, are subject to a number of internal and externals factors which must be in correct alignment for treatment-seeking to occur. The experiences of many Iowan gamblers and concerned others met these conditions. During the four year program evaluation period the IGTP handled a large number of crisis contact events across Iowa. The number of contacts fielded per month increased substantially over the duration of the evaluation period. The increase in crisis contacts might have resulted from several factors including increased need for treatment and increased awareness of treatment programs. In any one calendar year contacts seemed to peak in January and generally decline for the remainder of the year.

These increases and fluctuations occurred well after important gambling legalization events in Iowa. The rapid expansion of gambling venues in Iowa occurred in three distinct waves. The first started in 1983 with the legalization of pari-mutuel gambling, the second, in 1989 when the state legalized riverboat casinos and the third in 1992 with the legalization of Indian casinos. Thus, by the time the evaluation period for the IGTP began, at least 15 legal gambling venues were in operation.

Obviously casino operations and earnings are a function of both pathological and non-pathological gamblers' playing patterns. However, the playing patterns of pathological gamblers alone are not likely to exert sufficient financial impact to influence casino operations and earnings. For example, less than 160 gamblers contacted the IGTP in any month of the IGTP evaluation period and gambling revenue for the same period was never lower than 57 million. This number of help-seekers likely did not make enough money nor have enough credit to come close to driving such revenue figures. [6] Nevertheless, our analysis of the relationship between casino revenue and crisis contacts revealed a strong positive relationship between the two; revenue and contacts both increased over the duration of the evaluation period. A close examination of the fluctuations within AGR and IGTP crisis contacts revealed an interesting, yet frequently asynchronous relationship. In other words, revenue highpoints frequently accompanied IGTP crisis contact low points; conversely, crisis contact high points frequently accompanied revenue low points. This pattern is also obvious in the seasonal variations observed for AGR and crisis contacts.

As noted, both pathological and non-pathological gamblers determine overall casino revenues. Revenue fluctuations over the IGTP evaluation period reflect general increases and decreases in play among all types of gamblers. These are likely due to a combination of factors including but not limited to advertising, novelty, unspecified seasonal variability (e.g., holiday seasons; farming seasons), and social acceptability. Subsequent spikes in crisis contacts, in turn, might reflect the development of problems among gamblers most vulnerable to general increases in gambling. Like influenza, increased exposure targets vulnerable individuals first.

Although exposure is influential in the development of gambling problems, exposure is not necessarily constant across the state. Regions vary in exposure and as our regional analysis of crisis contacts showed, regions vary in help-seeking. In fact, consistent with our conceptual model of exposure, the Regional Exposure Model, exposure measured by presence of casinos and help-seeking co-vary. Clusters of gam-

[6] Further, the next section indicates that that average lifetime accumulation of gambling debt was about 14K. Even if 200 problem gamblers lost this much every month, instead of over their lifetime, changing their behavior could change AGR by less than 3 million dollars (5% of minimum monthly revenue estimate). Average monthly losses are likely much less than 14K; consequently, their impact might be smaller. Even if the IGTP crisis contacts represented only a tenth of the total problem gamblers in the state of Iowa, their contribution to gambling revenue would not be sufficient to account for fluctuations in AGR.

bling venues tend to accompany high concentrations of crisis contacts.

Taken together, these analyses of crisis contacts provide insight into overall demand for treatment from the IGTP and some factors that might influence that demand. Help-seeking was prevalent in Iowa and might relate to gambling exposure via regular fluctuations in general gambling patterns and the presence of casinos. Importantly, each crisis contact represents not only demand for treatment, but also the efforts of the IGTP. As covered in the next section, crisis services were at least 30 minutes on average. Thus, the services represented by the accumulated crisis contacts are sizable.

3.2 Program Services Delivered

3.2.1 Crisis Intervention

Earlier, we reported the temporal and area characteristics of the IGTP using information from the 5,092 valid crisis contact records. Generally, the crisis contacts were also described on the forms that documented services delivered. As a result, the number of records documenting the delivery of crisis intervention services, 5,197, is very similar to the total valid crisis contact records.

Table 1 Frequency and Percentage of Affirmative Referrals by Service

Service	Frequency of Referral	% of All Referrals
Gamblers Anonymous/Gam-Anon	4,080	57
Debt Management	2,364	33
Mental Health Counseling	431	6
Substance Abuse Counseling	229	3
Domestic Violence Counseling	41	1
Sexual Addiction Counseling	13	<1
Total	**7,158**	**100**

The IGTP logged 3,291 monthly records of crisis intervention services to problem gamblers and 1,906 to concerned others. Most (80%) crisis intervention services consisted of a single session. The minimum number of crisis intervention sessions in a month was 1 and the maximum was 6. The total minutes ranged from 5 to 360 and averaged 36 minutes per session.

The IGTP crisis intervention form includes mention of referrals provided to six types of other services, Gamblers Anonymous/Gam-Anon or Similar Group, Debt Management/Financial Counseling, Substance Abuse Counseling, Mental Health Counseling, Domestic Violence Counseling, and Sexual Addiction Counseling. As shown in Table 1, people were most often referred to self-help gambling services and debt management.

Crisis Intervention Services and Anonymity

The IGTP procedures allowed Iowans to receive crisis intervention anonymously. Half of the crisis intervention services were provided to participants who were not assigned a unique identifier. There were disproportionately more concerned others not uniquely identified than gamblers, 68% versus 40%. To examine whether or not reluctance to be identified influenced crisis intervention services, we created an "Anonymity" variable that grouped the 5197 service records into three categories of participants: (1) No Names Given, (2) First or Last Name Given, or (3) First and Last Name Given. Most records provided both a first and last name (68%). A small number (6%) provided neither first name nor last name and a moderate number (26%) provide either a first or a last name; Table 2 summarizes this pattern.

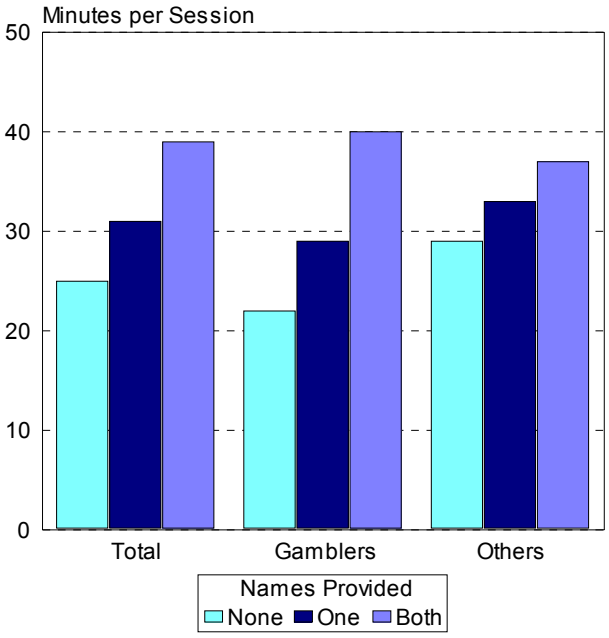
Table 2 Records by type of client and anonymity status (N=5197)

	Gamblers (n = 3,291)		Concerned Others (N = 1,906)	
Anonymity	N	%	N	%
No Names Given	173	5	117	6
First or Last Only	755	23	594	31
Both First and Last	2,363	72	1,195	63

We compared the average crisis intervention minutes per session across Anonymity groups.

The difference among groups was statistically significant ($F = 105$, $df = 2, 5190$, $p < .001$) as were the post-hoc comparisons of each pair of groups (Dunnett's T3 test.) We performed the same analyses separately for gamblers and concerned others. The gamblers analyses revealed a statistically significant difference for level of anonymity ($F = 110$, $df = 2, 3286$, $p < .001$) and significant differences between all pairs of groups. The analysis of length of crisis intervention sessions for concerned others showed significant differences among groups and the group that gave full names had significantly longer sessions than either the partial or no name groups (who were not different from each other; $F = 11.9$ $df = 2, 1901$ $p<0.001$). Figure 6 shows mean minutes per crisis intervention session by Anonymity group for the total sample and the subgroups of gamblers and concerned others.

Figure 6 Crisis Intervention Session Lengths by Anonymity



There can be several reasons for the observed differences in length of crisis intervention sessions among groups defined by their willingness to identify themselves. One possibility is that the individuals who did not give identity information were the most hesitant resource seekers and consequently spent as little time getting help as possible. The linear increase in minutes per session suggests that as individuals became less concerned for their anonymity, they participated more fully in the crisis intervention. The concerned others showed the same pattern but the overall difference was more narrow. For gamblers, the most engaged group's session lengths were 80% longer than session lengths of the people who gave no names. Among concerned gamblers, people who gave both names had sessions that were only 28% longer.

Crisis Intervention Services over Time

We reported earlier that the number of crisis intervention contacts increased significantly over the four years of the IGTP. Interestingly, the intensity of crisis intervention services as measured by the average length of sessions (i.e., the treatment dose) decreased significantly during this time. The correlation between session length and program month was -0.37 ($p < .01$). The average length of a crisis intervention session was 41 minutes in each of the first two years of the IGTP. In year three, the average length declined to 35 minutes and recovered slightly in the last year to 37 minutes.

The only referral that showed a significant change over the course of the four IGTP years was referral for debt management. The correlation between program month and the percent of crisis interventions that included referrals to debt management was 0.75 ($p < .01$). The percent of debt management referrals was 34% in year 1, 41% in year 2, 46% in year 3 and 56% in year 4, a significant linear trend for this timeframe ($F = 24$, $df = 3.44$, $p < .01$).

3.2.2 Counseling Services

The services data set is a monthly documentation of the services by treatment modality provided to participants by each agency. The services dataset identified 40,958 counseling sessions. indicates that 75% of the counseling was provided by four programs, and 88% of the counseling was individual or group counseling provided during the basic treatment program. Family counseling sessions made up only 3% of all sessions. Generally, continuing care comprised 5% to 7% of each program's treatment sessions. The exception is the program at Allen Memorial Hospital where more than a third

Table 3 Frequency of sessions by treatment program and service modality

Program	Counseling			Continuing Care Counseling		
	Individual	Group	Family	Individual	Group	Total
Gateway/Metropolitan Hospital*	6,222 (50%)	5,308 (43%)	142 (1%)	335 (3%)	330 (3%)	12,337 (30%)
Eastern Iowa Center For Problem Gambling, Inc.	5,412 (58%)	3,139 (33%)	387 (4%)	45 (1%)	396 (4%)	9,379 (23%)
Allen Memorial Hospital Gambling Treatment Program	1,444 (29%)	1,586 (31%)	138 (3%)	776 (15%)	1,115 (22%)	5,059 (12%)
Gordon Recovery Services	1,356 (32%)	2,463 (57%)	163 (4%)	80 (2%)	230 (5%)	4,292 (10%)
Delta Dynamics*	1,454 (50%)	1,082 (37%)	175 (6%)	178 (6%)		2,889 (7%)
Family Service	1,664 (58%)	1,193 (41%)	29 (1%)			2,886 (7%)
Substance Abuse Services Center	1,137 (68%)	482 (29%)	24 (1%)	15 (1%)	3 (1%)	1,661 (4%)
Alcohol & Drug Dependency Services of SE IA	850 (66%)	357 (28%)	28 (2%)	26 (2%)	24 (2%)	1,285 (3%)
Jennie Edmundson Hospital Gambling Treatment Program	457 (64%)	233 (33%)	22 (3%)			712 (2%)
Community and Family Resources	167 (49%)	155 (46%)	16 (5%)			338 (1%)
NW Iowa Alcoholism & Drug Treatment Unit, Inc.	89 (100%)					89 (<1%)
Ringgold County*	22 (100%)					22 (<1%)
Prairie Ridge*	8 (89%)	1 (11%)				9 (<1%)
Total	20,282 (49%)	15,999 (39%)	1,124 (3%)	1,455 (4%)	2,098 (5%)	40,958 (100%)

* Programs not currently under contract with the IGTP
Note. Percentage of sessions by modality is within each program except for the Total, which is the percentage of sessions per provider of total sessions.

(37%) of all sessions were continuing care counseling.

Gamblers received 85% of the counseling sessions and concerned others received 15%. The distribution of sessions for each counseling modality presented in Table 4 indicates that concerned others and gamblers had similar treatment patterns. Compared to gamblers, there were 5% fewer group counseling sessions and 5% more family counseling sessions. This finding is consistent with the higher eligibility for family counseling among concerned others. However, family counseling sessions constitute only a very small fraction (3%) of the total counseling, and contribute only slightly to the difference between treatment programs according to type of participant.

Table 4 Sessions by Modality and Type of Client

	Concerned Others		Gamblers	
Service	**Sessions**	**%**	**Sessions**	**%**
Individual Counseling	2,984	48	17,298	50
Group Counseling	2,230	35	13,769	40
Family Counseling	419	7	705	2
Continued Care: Individual	188	3	1,267	4
Continued Care: Group	414	7	1,684	5
Total	**6,235**	**15**	**34,723**	**85**

3.2.3 Summary

Most crisis interventions consisted of a single session and averaged 36 minutes per session; session length dipped after the initial year but rebounded slightly in the last year of the program. In addition to being the entry point for the IGTP, crisis intervention participants could also be referred to six types of other services. Participants were most often referred to self-help gambling services (57%), such as Gam-Anon and Gamblers Anonymous, and to debt management counseling (33%). Over the course of the four IGTP years, there was a steady increase in the percent of crisis interventions that included referrals to debt management; this may reflect an increasing awareness of the availability and benefits of this type of service on the part of the treatment providers.

Half of the crisis intervention services were provided to participants who chose to remain anonymous. Concerned others were far more likely to withhold their identity than gamblers. Concerned others might be calling for information and may not see the need to give a name. Anonymity influenced the length of crisis intervention services; identified gamblers took part in sessions that were 80% longer than those who gave no identifying information. Though the difference between the groups was narrower, the session length for concerned others also increased with willingness to self-identify. Hesitancy to self-identify may signal an underlying reluctance to participate in treatment. In order to overcome their hesitation, providers might need to utilize additional tactics to engage this population. Unfortunately, those who choose anonymity are not assigned a unique identifier and we are not able to determine whether the length of crisis intervention influenced entry into the program.

Counseling services were provided by 13 programs, with four of these programs accounting for 75% of the counseling sessions. Gamblers received 85% of the counseling sessions and concerned others received 15%. Almost half of the counseling was individual counseling provided during the basic treatment program. Significant resources were also devoted to group sessions, which accounted for almost 40% of total sessions. Family counseling sessions made up only 3% of all sessions. Slightly more concerned others participated in family counseling, which is consistent with their higher eligibility and their demonstrated concern about someone close to them, likely a family member. Continuing care comprised very little of each program's treatment sessions (5-7%) except for the Allen Memorial Hospital site. A larger fraction of IGTP participants received continuing care services at Allen Memorial (17.1%) than at the other treatment sites combined (4.5%; $\chi^2 = 72.4$, $df = 1$, $p < .01$). As reported below, the inclusion of a concerned other in treatment increased the likelihood of receiving continuing care services (See Table 26). Consistently, significantly more of the gamblers at Allen Memorial had a concerned other in treatment (38.9%) than those at other sites (27.3%; $\chi^2 = 9.7$, $df = 1$, $p < .01$). However, the increased level of continuing care services did not impact on the completion rate. The proportion of Allen Memorial gamblers with complete or nearly complete treatments was 14.6% which is nearly identical to the 14.5% rate at other sites. Finally, the proportion of multiple admissions was larger at Allen Memorial (17.8%) than at other sites (11.3%, $\chi^2 = 9.0$, $df = 1$, $p < .01$). Therefore, this single distinction among programs in the profile of services provided does not seem to affect treatment completion and its affect on treatment multiplicity is in the opposite direction (i.e. towards greater number of treatment episodes).

3.3 Service Participants

3.3.1 Characteristics at Admission

The previous section described the results of our analyses of the IGTP information from the perspective of the program as a whole and reported on information aggregated over all valid records within phases of the program: crisis contacts, admission and placement screening, and services delivered. We determined that a similar aggregation of the demographic characteristics, histories and behaviors would not accurately represent Iowans seeking treatment for gambling problems unless the information base was first collated by individuals. To develop a description of the typical gambler who obtained services

from the IGTP, not confounded by self-selected anonymity and multiple treatment episodes, we processed the information base to yield a cohort of identified gamblers and concerned others. Characteristics at initial entry (baseline) into the IGTP were obtained from the two potential sources, admission and patient placement interviews. Information obtained at second and subsequent treatment episodes was identified and segregated for later analysis. We then collated the information for those identified gamblers into a single data base that includes all the types of information collected by the IGTP. The process that generated the information base is described in detail in Appendix D. The analyses presented in this section describe the IGTP from the perspective of identified gamblers and include analyses that span the course of treatment.

Our collation produced an information base of 2,730 identified clients, 2356 gamblers (86%) and 374 (14%) concerned others. We eliminated the 34 admission records on clients who chose to remain anonymous. Nearly half the identified clients (46%) had both a placement screening and an admission record. The other clients provided either a placement screening record (31%) or an admission record (23%). The concerned others were not linked to gamblers, nor to each other in those cases where several participants were concerned others of the same gambler. A description of the characteristics of the concerned others is confounded by this lack of linkage. For this reason, only a brief demographic picture of concerned others will be presented (see Table 5). Detailed descriptions of other characteristics concentrate on participants in the program who identified themselves as the person with a gambling problem.

The gamblers seeking treatment from the IGTP during the course of the study period included some with more than one treatment episode. Of the 2,356 identified gamblers, 88% had only a single treatment episode and another 10% had a second episode during the study period. There were a few gamblers (N=54, 2%) with more than two episodes. The first admission provided the baseline information. Later analyses will investigate the differences between singly- and multiply-treated clients.

3.3.2 Demographics of Treatment Population

Table 5 presents basic demographic information for clients entering the Iowa Gambling Treatment Program and for the general Iowa population as measured by the U.S. Census (United States Census Bureau, 2002). We compared the characteristics of the gamblers against those of the general population. The table is annotated to indicate the characteristics that were significantly different. Except for race, it was unlikely that the gamblers were a random sample from the total population. The information on gamblers' race was reflective of the Iowa's racial composition; almost 94% of both groups were Caucasian ($t(2337=-0.204\ p>0.05)$. There were proportionately more men (58%) than women gamblers than expected in the general population ($t(2355)=-7.17\ p<0.05$). Gamblers were older than the general population ($t(1803)=19.66\ p<0.05$) and differed from the general population in their family economic situation ($t(205)= -4.03\ p<0.05$). The gamblers had incomes that were only 89% of that of the total population. They were less likely to be employed as a salesmen or professionals and more likely to be working in a labor and production capacity ($t(1377)=8.01\ p<0.05$). Gamblers were more than twice as likely to be separated or divorced ($t(2339)=-9.91\ p<0.05$) and tended to have more children ($t(1672)=17.89\ p<0.05$). Although more gamblers had completed high school than the general population ($t(1677)=8.46\ p<0.05$), fewer gamblers had obtained a college degree ($t(1677)=-9.27\ p<0.05$) and they were far more likely to be unemployed ($t(1785)=9.25\ p<0.05$). To correct for the higher unemployment rate, we compared the mean individual income and the median household income for employed clients (full or part time) to similar statistics from the Iowa census.

Table 5 Selected Demographics at Admission or Placement Screening for Admitted Clients and for the General Population in Iowa

Item	Concerned Others (N = 374)	Gamblers (N = 2,356)	2000 Iowa Census Data
Mean Age in Years[7]*	43.0	42.7	37.1
% Male*	20.6	58.2	49.1
Mean number of children for parents*	2.7	2.5	1.9
Relationship Status for Population 15 and Older*			
% Single	9.5	20.1	24.9
% Married	73.6	47.6	57.8
% Separated or Divorced	10.3	22.1	10.1
% Widowed	0.8	3.1	7.2
Race			
% White	97.1	93.8	93.9
% Black	1.6	3.2	2.1
% Other	1.4	3.0	2.9
% Hispanic or Latino	0.6	1.5	2.8
Education – Highest Level Achieved by Population 25 Years and Older*			
% HS Graduate or Higher	97.4	91.9	86.1
% BA or Higher	19.6	14.4	21.2
Employment for Population 16 and Older*			
% Employed full or part-time	79.4	75.7	65.3
% Looking	3.0	7.1	2.9
% Not in Labor Force	17.6	17.1	31.8
Mean Total Monthly Individual Income[8]	$2264	$2178	
Median Total Monthly Household Income*	$3525	$2924	$3289
Occupation for Population 16 and Older [9]*			
% Professional	41.1	29.6	31.3
% Crafts/Laborer	18.9	36.0	27.0
% Sales	24.9	21.3	25.9
% Service	12.5	11.3	14.8
% Farm Worker	2.7	1.8	1.1
Military Status*			
% Veteran	5.4	15.3	13.3
% Active Service	-	1.0	0.1

* $p < .05$

[7] The census data is based on the population 18 and older, there were, however, 3 gamblers and 10 concerned others below that age in the Iowa dataset.

[8] The census does not report individual income.

[9] Occupational categories from the IGTP are matched as closely as possible to similar occupational categories from the US Census.

3.3.3 Economic, Social and Health Variables

Table 6 presents the economic, social and health problems experienced by individuals with gambling problems. About one in eight (13%) gamblers reported losing at least one job in the past five years. On average, gamblers wagered $522 a week and were $34,639 in debt, with $14,084 attributable to gambling. It is important to note that the median value for gambling debt was $4,060 and the median value for weekly wagers was $300. This finding suggests that most individuals accumulated considerably less gambling debt than indicated by the mean value (i.e., average); the corollary to this observation indicates that there are limited, but statistically influential, cases with very large gambling related debt.

A quarter of the gamblers had declared bankruptcy. Forty-one percent of gamblers had been arrested in their lifetimes; 22% of those arrested had been arrested on charges related to gambling. 23% of gamblers had been treated for substance abuse. The health risk behaviors they engaged in at least daily at the time of admission show a high rate of tobacco use and relatively large proportions of the gamblers reporting compulsive behaviors and abuse of food, alcohol, and other substances. Although most clients had some form of health insurance (72%), only 52 individuals reported that their insurance covered gambling treatment. The bulk of the sample (91%) reported that their primary source of payment would be state unit reimbursement. A helpline referred the greatest number of individuals (36%) to the treatment program.

Table 6 Selected Demographics at Admission or Placement Screening for Admitted Gamblers

Economic Factors	
% Declaring Bankruptcy	23.7
Credit Card Debt	$7726
Total Debt	$34639
Gambling Debt	$14084
Amount Lost Weekly	$522
Most Lost in 1 Week (last 6 months)	1929
% Lost Legally (weekly)	94
% Lost Illegally (weekly)	4
Work days missed due to gambling (last 6 months)	2.10
Jobs lost due to gambling (last 5 years)	0.22

Social Factors (%)	
Arrested in Lifetime	40.5
Arrested for Gambling	8.9
Arrested in past 12 months	14.1
Attend GA Meetings	17.2
Treated for Substance Abuse	22.8

Health Risk Behaviors (at least daily, %)	
Tobacco Use	60.8
Compulsive Work	5.9
Food Abuse	4.0
Alcohol Use	3.7
Compulsive Sex	2.1
Illicit Drug Use	1.7
Compulsive Spending	1.3
Prescription Drug Use	1.1
Physical Harm to Self	0.3
Physical Violence	0.0

Table 6 Selected Demographics at Admission or Placement Screening for Admitted Gamblers (cont.)

Referral and Payment (%)	
With Health Insurance	72.0
With Treatment Coverage	2.5
Recommendation for treatment	89.1
Sought Prior Help for Gambling Problems	20.5
Primary Source of Payment	
State Unit	91.3
Self-Pay	5.5
No Charge	0.8
Health Insurance	0.8
State Non-Unit	0.6
Private Pay	0.5
Medicaid Eligible	0.2
Other Federal Funds	0.2
Medicare Eligible	0.1
Medicare/Medicaid Eligible	0.1
Referral source	
Helpline	36.2
Self	27.5
Justice Court	6.8
AOD Provider	6.7
Other Person	5.8
Spouse/Partner	4.9
Health Provider	3.0
Employer or EAP	2.7
Community Clinic	2.4
Other Community	1.7
Debt Counselor	1.6
GA Gam-Anon	0.6
School	0.2

3.3.4 Gambling Behavior

Table 7 presents gambling behaviors for admitted gamblers. When they first gambled, admitted gamblers were a mean age of 25 years and 42% reported their first gambling experience was with friends.

Over a decade elapsed before the average gambler began experiencing gambling problems. The largest portion of money spent on gambling was to play slot machines; the portion of gambling money spent on slot machines (58%) was four times as much as the next largest activity, casino table games (14%). Finally, 62% reported gambling at least weekly in the last 30 days and 10% reported gambling daily.

For some phases of the IGTP (e.g., crisis contacts) participants who chose to remain anonymous represent much of the information collected. Roughly half of all crisis contacts were from interactions with anonymous respondents. Information obtained at a further point in the sequence of services delivered involved just a few anonymous respondents but the information could still be confounded by the presence of multiple admissions. In our earlier presentation of baseline demographic characteristics, we described the construction of the gambler-specific information base. As a result, we were able to identify gamblers who had a single admission to the IGTP and those with multiple episodes. This section begins with an examination of the differences between singly- and multiply-treated gamblers. In the next section, we describe the differences between groups of gamblers defined by characteristics that can impact gambling problems and treatment (i.e., gender, gambling treatment prior to IGTP, and whether a concerned other of the gambler also participated in the IGTP). The groups are contrasted on several factors, such as background characteristics, finance, and health related behaviors.

3.3.5 Treatment Multiplicity

Although people with multiple treatments might confound the description of the basic demographic and behavioral characteristics of gamblers, an analysis of the multiply-treated clients could be helpful in developing interventions to help prevent relapse. The process of

Table 7 Gambling Behavior at Admission or Placement Screening for Admitted Gamblers

Mean age when first gambled	25.2	**Person first gambled with**	
Mean age when problem gambling began	38.1	Friend	42.3
		Family	14.8
Family acceptance of gambling		Relative	11.7
Yes	43.2	Self	10.3
No	33.0	Parent	9.2
		Other	7.5
Mean % of money gambled per activity		Sibling	3.6
Slots	58		
Casino Games	14	**Frequency of All Types of Gambling in the Last 30 Days**	
Video Poker	10		
Scratch Tickets	4	None	16.6
Sports	3	Less than once a week	21.2
Racetrack	2	1 or 2 times a week	29.3
Lottery	2	3 to 6 times a week	23.2
Bingo	2	Daily	7.7
Non-Casino Cards	1	2 to 3 times a day	1.4
Other	1	4 or more times a day	0.7
Stocks	1		
Keno	1		

identifying initial and subsequent treatment episodes grouped the 2,356 admitted gamblers into two groups: (1) a large group with only one treatment episode (N = 2,068, 88%) and (2) a group with multiple episodes (two episodes N = 234, 11%, more than two N = 54, 1%). We completed two main analyses. First, we compared the information provided at the first admission to identify general differences between the groups. Second, in order to identify changes that might relate to the treatment experience, we compared the characteristics provided by multiply-treated gamblers at their first admission to characteristics reported at their second admission.

Differences between Singly and Multiply Treated Gamblers at Baseline

Gamblers who had multiple treatment episodes were not different from other gamblers on any of the basic demographic measures of age, gender, number of children, relationship, race, ethnicity, education, employment, occupation, military status, health insurance or income.

Multiply-treated gamblers reported wagering on more days during the 30 days prior to admission than did their first admission counterparts ($t(2336)=-1.74$ $p<0.05$). However, multiply treated gamblers wagered a smaller portion of their total wagers on live keno ($t(1305.4)=2.4$ $p<0.05$) and at race tracks ($t(607.5)=3.06$ $p<0.05$) than single admissions. Table 8 presents the group means for these and other variables with significant differences. There were no differences between these groups on other measures of gambling style including preference for other gambling activities and the proportions of legal and illegal gambling.

Groups distinguished by treatment episodes were not different on measures of gambling history. These measures included the time from when they first thought they had a gambling problem to admission, age at first exposure to gambling, who they first gambled with, and family acceptance of gambling.

Gamblers who went on to have multiple episodes of treatment had more severe experiences as a result of their gambling. The observed differences were not in terms of gambling losses. The multiply-treated gamblers' total debt and

debt due to gambling were not different from participants who had a single treatment episode and their credit card debt was actually significantly less than participants with a single treatment episode ($t(628.2)=2.24$ $p<0.05$). Given that the overall debt was the same for both groups, this finding might result from multiply-treated gamblers having lower credit card limits and/or fewer credit cards, possibly due to previous credit problems.

Gamblers with multiple treatment episodes evidenced more severe non-monetary experiences due to gambling. They missed more days of work or school due to a gambling-related problem ($t328.4)=-1.73$ $p<0.05$), had more prior gambling-related arrests ($\chi^2(1)=7.9$ $p<0.05$), and a higher percentage of them had prior treatment for gambling problems ($\chi^2(1)=21.66$ $p<0.05$). At intake, the interviewer provided a global measure of severity of need for treatment by recommending or not recommending the client for treatment. More of the multiply treated gamblers were recommended for treatment ($\chi^2(1)=10.19$ $p<0.05$).

Participants were asked to identify behaviors in the last 30 days and whether they had ever been treated for substance-related problems. Multiple-episode gamblers were more likely to have a history of treatment for substance abuse ($\chi^2(1)=2.95$ $p<0.05$), but single episode gamblers were more likely to have used drugs in the past 30 days ($\chi^2(1)=4.27$ $p<0.05$). They did not differ on tobacco, or alcohol use, or on compulsive work, sex, or spending. They did not experience physical violence or harm to themselves with any greater frequency. They were more likely to abuse food (self-starvation, purge, and binge) ($\chi^2(1)=5.59$ $p<0.05$).

Table 8 Baseline Characteristics of Single and Multiple Treatment Episode Clients

	Single		Multiple		
Measure	Mean	N	Mean	N	Significance
% Live Keno Gambling	0.6	2036	0.2	268	p < .05
% Race-track Gambling	2.2	2036	0.8	268	p < .01
Days Wagered Last Month	10.3	2050	11.9	288	p < .10
Credit Card Debt	$7,953	2002	$6,134	285	#
Days of Work Missed Last 6 months	2.0	1847	3.0	268	p < .10
% Prior Gambling-related Arrest	10%	2068	15%	288	p < .01
% Prior Gambling Treatment	19%	2050	31%	288	p < .01
% Recommend for Treatment	88%	1604	96%	205	p < .01
% Used Illicit Drugs Last Month	7%	2068	4%	288	#
% Food Abuse Last Month	13%	2068	18%	288	p < .05
% Treated for Substance Problems	22%	2049	27%	288	p < .10

# p < .05 but the single treatment group was more severe in these instances.

The Differences between the First and Second Admissions of Multiply-treated Gamblers

The IGTP program provided services to 288 gamblers with multiple admissions to treatment during the study period. We examined the differences in gambling-related behavior and sequelae of problem gambling reported at the be-

ginning of the first and second admissions to treatment. The time from first to second admission ranged from one month to three and a half years. The distribution of time between admissions was reasonably flat as indicated by the fact that the modal interval (three months) was the case for only 7% of the sample. The median interval was eleven months. Some of the items asked for information about the last six months. To avoid confounding results due to an overlap of the referenced time, we concentrated our analysis on participants with seven or more months between admissions. (To gauge the effect of eliminating early readmissions, we repeated the analyses without eliminating any second admissions. The results of the analyses were the same with and without the early readmissions.)

By the second admission, gamblers continued to accumulate untoward events due to gambling. Work-related problems due to gambling increased between admissions. The number of jobs lost in the last five years increased significantly. We considered that some participants returning to treatment would feel the need to get help before losses mounted to previous levels. The differences between admissions on gambling-related debt, weekly losses, and most money lost in a week during the last six months were not significantly large, but were all in the direction of involving more money at the second admission.

Table 9 presents the group statistics for characteristics that changed significantly from the first treatment episode to the next for gamblers who went longer than six months between admissions. The gamblers made changes in their gaming preference by reducing wagering on slots ($t(183)=-2.3$ $p<0.05$), videos ($t(170)=-3.15$ $p<0.05$), bingo ($t(167)=-2.58$ $p<0.05$), sports betting ($t(168)=-1.98$ $p<0.05$). These declines in preference of gambling venues were offset by increases in lottery and scratch tickets plays but those differences were not statistically significant. This might represent an attempt to avoid casinos, the venue for slot machines and video betting activities. The change in venue preferences did not influence the amount of usual losses, which increased slightly over time. The multiply-treated gamblers experienced significant increases in jobs lost due to gambling problems ($t(189)=2.26$ $p<0.05$). One seemingly positive change after the first treatment episode is that the multiply-treated gamblers reduce the days they gambled in the 30 days before admission $t(199)-3.396$ $p<0.05$).

Table 9 Differences between First and Second Treatment Episode by Gamblers

	First Episode	Second Episode		
Measure	**Mean**	**Mean**	**N**	**Significance**
% Slot Machine Gambling	60	54	184	*
% Video Poker/Games Gambling	11	8	171	*
% Bingo Gambling	3	1	168	*
% Sports Betting	3.5	1.7	169	*
Days Wagered Last Month	12.7	11.7	200	*
Jobs Lost Due to Gambling in the last Five Years	0.18	0.26	190	*

* $p < .05$

These analyses have identified some differences between people who had a single treatment and those with multiple treatment episodes during the study year. There are several qualifications to the results. First, there are a number of clients identified as single treatment participants who have not had sufficient time at risk to group them accurately. The median interval between first and second admissions was 11 months. The clients who were admitted in the last year of the study period include many who are (would be) in need of multiple treatments. Second, there may be some clients in the single-treatment group that relapsed after their initial treatment within the IGTP but who did not seek treatment or who received treatment outside of the IGTP. Some clients had a history of treatment for gambling problems prior to the IGTP. Nineteen percent (19%) of the gamblers identified as single-treatment subjects in our study reported previous treatment at baseline. The effect of these condi-

tions is to reduce the number and magnitude of group differences because the single-treatment group contains some potentially or actually multiply-treated clients. The differences observed between groups are thusly conservative. As a corollary, we are more confident that the differences would also be observed using more accurately defined groups.

3.3.6 Individual Differences

The admissions/placement screening form provided a large amount of information pertaining to individuals' background characteristics, financial profile, history of delinquency, gambling habits, and associated health behaviors. Using this information, Section 3.3 detailed IGTP participants' overall profile. In the current section, we use the same information to report more detailed profiles for individuals distinguished by the following factors: gender, gambling treatment history, and concerned other involvement. We targeted these factors because of the potential for differences in inter-group profiles to impact on treatment planning and outcomes. All analyses in this section used information from the gamblers' baseline data (N=2,356).

Gender

Background Characteristics

Consistent with previous research (Tavares, Zilberman, Beites, & Gentil, 2001), women participants in the IGTP began gambling later in life ($t(1910.2)=-16.04$ $p<0.05$) and developed a problem with gambling later ($t(2149.8)=-10.45$ $p<0.05$); women also progressed to problem gambling ($t(2126.1)=5.99$ $p<0.05$) and progressed to treatment more quickly than did men ($t(2023.6)=9.46$ $p<0.05$) (Table 10). Women were more likely to be married ($\chi^2(2)=37.38$ $p<0.05$) and were more likely to report that they were parents ($\chi^2(1)=40.13$ $p<0.05$). Men were more likely to report that they had full-time employment ($\chi^2(1)=28.45$ $p<0.05$). There was no statistical association between gender and the following background variables: highest grade completed, months employed in past 6 months, and race.

Table 10 Statistically Significant Gender Differences in Background Characteristics

	Men	N	Women	N
Background	**Mean (SD)**		**Mean (SD)**	
Age First Gambled	21.7 (11.3)	1350	30.0 (13.0)	974
Age Gambling Became a Problem	35.8 (12.2)	1263	40.9 (10.7)	944
Years to Problem	14.0 (12.7)	1263	10.9 (11.5)	942
Years to Treatment	5.7 (6.9)	1258	3.6 (3.7)	937
	Percent		**Percent**	
Relationship History				
Single	24%	1361	14%	977
Employment Status				
Employed Full Time	72%	1361	61%	978
Parental Status				
Parents	34%	1362	22%	977

Financial Situation

Women reported a lower personal monthly income than did men ($t(2168.6)=6.14$ $p<0.05$) (Table 11). There was no statistical association between gender and the following finance variables: bankruptcy status, current household income, credit card debt, overdue bills, total debt, and gambling debt.

Table 11 Statistically Significant Gender Differences in Financial Characteristics

	Males	N	Females	N
Income	**Mean (SD)**		**Mean (SD)**	
Personal Monthly	$2015 (2229)	1358	$1459 (2107)	977

Delinquency

Men tended to report more delinquent behaviors. For example, they lost more jobs due to gambling ($t(2063.6)=3.75$ $p<0.05$) and surpassed women on all arrest variables (arrests last year $t(2224.2)=3.69$ $p<0.05$; total arrests $t(1834.9)=8.0$ $p<0.050$; gambling arrests $t(2272.03)=2.6$ $p<0.05$; non-gambling arrests $t(1813.6)=7.8$ $p<0.05$); ever incarcerated $\chi^2(1)=116.03$ $p<0.05$) (Table 12). There were no statistical associations between gender and days

of work or school missed due to gambling problem.

Table 12 Statistically Significant Gender Differences in Delinquency Characteristics

	Males	N	Females	N
Delinquency	**Mean (SD)**		**Mean (SD)**	
Jobs Lost due to PG	0.27 (1.03)	1291	0.15 (0.55)	908
Arrests last Year	0.24 (0.63)	1347	0.15 (0.56)	974
Total Arrests	2.22 (6.63)	1347	0.64 (2.52)	974
Gambling Arrests	0.18 (0.87)	1347	0.12 (0.54)	974
Non-gambling Arrests	2.04 (6.51)	1347	0.53 (2.41)	974
Ever Incarcerated	**Percent**		**Percent**	
Yes	31%	1361	12%	977

Gambling

The gambling habits and experiences of men and women differed in a number of ways. At the basis of some differences might be a greater cultural acceptance of gambling among men then women. In this study, the bias is confirmed by the finding that more men reported that their family found gambling acceptable ($\chi^2(2)=6.70$ $p<0.05$). Men also reported greater dollar losses (total lost weekly $t(2165.6)=2.0$ $p<0.05$, most lost in one week $t(1723.7)=4.14$ $p<0.05$), and losses were illegal ($t(2225.7)=6.32$ $p<0.05$) at a greater proportion than women reported losses were illegal. Although both men and women reported that they spent the majority of their money playing slots, men reported spending significantly less money on slots than did women ($t(2209.4)=-15.23$ $p<0.05$). Men's playing patterns seemed more diverse; the average woman gambler spent 73% of her gambling money playing slot machines. Further, a greater proportion of women reported daily or more gambling ($\chi^2(2)=6.26$ $p<0.05$). This supports other research that suggests that women play lower cost games, perhaps in order to maximize the amount of time they are able to play (Hing & Breen, 2001). Men wagered more on casino games ($t(2154.7)=13.47$ $p<0.05$), sports ($t(1591.7)=8.31$ $p<0.05$), and races ($t(1500)=7.0$ $p<0.05$), but women wagered more playing bingo ($t(1371.5)=-4.53$ $p<0.05$) (Table 13). There was no association between gender and the following gambling variables: days gambled in the last month, money spent on keno, money spent on video poker, and money spent on scratch tickets.

Table 13 Statistically Significant Gender Differences in Gambling Behavior

	Males	N	Females	N
Losses	**Mean (SD)**		**Mean (SD)**	
Total Lost Weekly	$561 (1474)	1361	$467 (777)	977
Percent Lost Illegally	6 (21)	1360	2 (12)	976
Most Lost in 1 Week	$2,306 (7532)	1359	$1,403 (2410)	977
Gaming Preference	**% Wagered**		**% Wagered**	
Slots	46 (44)	1341	73 (39)	963
Casino Games	21 (36)	1341	5 (20)	963
Sports	5 (18)	1341	> 1 (5)	963
Racetrack	3 (16)	1341	> 1 (3)	963
Bingo	1 (7)	1341	3 (13)	963
Family Acceptance of Gambling				
Accepting	45.6%	1361	40.7%	977
Gambling Frequency				
Almost Daily or More	32.2%	1361	34.1%	977

Health Behaviors

Women were more likely to report that they had health insurance ($\chi^2(1)=6.7$ $p<0.05$) while men were more likely to report that they had a concerned other involved (COI) in their treatment ($\chi^2(1)=20.49$ $p<0.05$). Few people reported poor health behaviors other than smoking and drinking. Analyses revealed, however, gender differences for a number of health behaviors. For example, relative to men, women reported more almost daily or more tobacco use ($\chi^2(2)=8.1$ $p<0.05$), food abuse ($\chi^2(2)=49.09$ $p<0.05$), and compulsive shopping ($\chi^2(2)=18.95$ $p<0.05$); men reported more almost daily or more alcohol ($\chi^2(2)=29.60$ $p<0.05$) and illicit drug use ($\chi^2(2)=13.93$ $p<0.05$) and were more likely to have previously received drug or alcohol treatment ($\chi^2(1)=77.81$ $p<0.05$) (Table 14). There were no significant differences between gender and the following health variables: prior help with gambling, prescription drug abuse, compulsive working, compulsive sex, violence, self-harm, GA meetings/month.

Table 14 Statistically Significant Gender Differences in Health Behavior

	Males	N	Females	N
	Percent		Percent	
Health Insurance				
Yes	70	1361	75	977
Concerned Other Involved				
Yes	32	762	23	603
Prior Drug or Alcohol Treatment				
Yes	29	398	14	134
Tobacco Use				
Almost Daily or More	59	1,360	65	977
Alcohol				
Almost Daily or More	11	1,361	7	977
Illicit Drug Use				
None	93	1,359	96	974
Food Abuse				
Yes	9	1,360	19	974
Compulsive Shopping				
Yes	11	1,357	17	974

Treatment History

Background Characteristics

Treatment history related to a number of participants' background characteristics. For example, those who reported previous treatment for gambling (PT) also reported more years of education ($t(716.7)=3.33$ $p<0.05$) and more years between the time they developed a problem with gambling and entering the IGTP ($t(676.7)=6.94$ $p<0.05$). PTs were younger the first time they gambled ($t(2322)=-2.43$ $p<0.05$) and when they first developed a problem with gambling ($t(2205)=-3.578$ $p<0.05$) than were individuals who reported no previous treatment for gambling (NPT) (Table 15). There was no statistical association between treatment history and the following background variables: parental status, relationship history, race, employment status, months employed in past 6 months, and years to develop problem.

Table 15 Statistically Significant Background Characteristics by Treatment History Group

	Previously Treated		Not Previously Treated	
Background	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Highest Grade Completed	13.2 (2.1)	480	12.9 (1.9)	1858
Age First Gambled	24 (12)	479	26 (13)	1845
Age Gambling Became a Problem	36 (11)	476	38 (12)	1731
Years to Treatment	6.6 (6.5)	474	4.3 (5.6)	1721

Financial Situation

Treatment history related to the amount of debt individuals reported. Specifically, PTs reported more total debt ($t(602.71)=2.09$ $p<0.05$) and more gambling related debt ($t(553.9)=3.22$ $p<0.05$) which might reflect a longer history of problem gambling. PTs also were more likely to have declared bankruptcy ($\chi^2(1)=26.85$ $p<0.05$) (Table 16). There was no statistical association between treatment history and the following finance variables: personal monthly income, household monthly income, credit card debt, and overdue bills.

Table 16 Statistically Significant Financial Situations by Treatment History Group

	Previously Treated		Not Previously Treated	
Debt	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Total	$40,392 (71,738)	478	$33,120 (49,757)	1,809
Gambling Related	$18,417 (49,757)	479	$12,956 (27,123)	1,840
Bankruptcy Status	**Percent**		**Percent**	
Declared	33	480	21	1,858

Delinquency

Table 17 shows that individuals who reported previous treatment for gambling were more likely to report that they had lost a job due to gambling ($t(564.5)=2.05$ $p<0.05$). There were no statistical associations between treatment history and the following variables: history of incarceration, days of work missed due to problem gambling, times arrested in past year, lifetime arrests, gambling arrests, non-gambling arrests.

Table 17 Statistically Significant Delinquent Behaviors by Treatment History Group

	Previously Treated		Not Previously Treated	
Delinquency	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Jobs Lost due to PG	0.31 (1.2)	464	0.19 (0.75)	1734

Gambling

PTs perceived their families to be more accepting of gambling than NPTs ($\chi^2(2)=6.15$ $p<0.05$). Treatment was associated with gaming preference; PTs spent more money on casino games ($t(666.7)=2.1$ $p<0.05$) and NPTs spent more money on slots ($t(702.9)=-2.51$ $p<0.05$) and playing non-casino cards ($t(1690.5)=-2.99$ $p<0.05$) (Table 18). There was no association between treatment history and the following gambling variables: gambling frequency in past 30 days, total lost weekly, percent lost legally, percent lost illegally, most lost in one week in past 6 months, money wagered spent on keno, money wagered spent on video poker, money wagered spent on bingo, money wagered spent on scratch tickets, money wagered spent on lotteries, money wagered spent on racetrack, money wagered spent on sports betting, money wagered spent on stocks, money wagered spent on other gambling.

Table 18 Statistically Significant Gambling Behavior by Treatment History Group

	Previously Treated		Not Previously Treated	
Gaming Preference	**%**	**N**	**%**	**N**
Casino	17	465	14	1,839
Slots	53	465	59	1,839
Non-casino Cards	1	465	1.4	1,839
Family Acceptance of Gambling				
Accepting	49	480	42	1,858

Health Behaviors

As might be expected, PTs were more likely to report attending GA meetings in the months before admission ($t(578.3)=4.0$ $p<0.05$). These individuals were also more likely to report abusing food almost daily or more ($\chi^2(2)=20.23$ $p<0.05$). Table 19 summarizes these findings. There were no significant differences between treatment history and the following health variables: health insurance status, concerned other involvement, previous drug or alcohol treatment, tobacco use, alcohol use, illicit drug use, prescription drug abuse, compulsive work, compulsive sex, compulsive shopping, violence, self-harm.

Table 19 Statistically Significant Health Behaviors by Treatment History Group

	Previously Treated		Not Previously Treated	
Self-help	**Mean (SD)**	**N**	**Mean (SD)**	**N**
GA meetings/month	1.3 (3.57)	480	0.6 (2.22)	1,858
Food Abuse	**Percent**		**Percent**	
Yes	20	479	11	1,855

Concerned Other Involvement

The reader will remember that concerned others were not linked to gamblers in the information base. The only record of the participation of concerned others in a gambler's treatment is an item on the discharge record. However discharge records with this item completed were available for only 1,337 gamblers. The discharge records included 384 (64% male and 36% female) gamblers with a concerned other. The total number of concerned others in the identified and collated information base was 374. The small gap between these figures supports the perception that most gamblers with concerned others have been identified and the results are not biased by a lack of complete information.

Background Characteristics

As Table 20 summarizes, the involvement of a concerned other is related to a number of other participant background characteristics. Individuals who reported concerned other involvement (COI) were more likely to report employment in the past six months ($t(739.7)=2.05$ $p<0.05$) and to report full time employment ($\chi^2(1)=9.78$ $p<0.05$). These individuals were also much more likely to currently be married or cohabitating with someone ($\chi^2(2)=83.6$ $p<0.05$) and to be parents ($\chi^2(1)=5.36$ $p<0.05$). Finally, relative to individuals who reported no concerned other involvement (NCOI), a greater proportion of the COI group was white ($\chi^2(1)=4.35$ $p<0.05$). There was no statistical association between concerned other involvement and the following background variables: highest grade completed, age first gambled, age gambling a problem, years to develop a problem, years to enter treatment.

Table 20 Statistically Significant Background Characteristics by Concerned Other Group

	COI		NCOI	
Background	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Months Employed in the Past 6 Months	5.2 (1.8)	363	4.9 (2.0)	868
Relationship History	**Percent**		**Percent**	
Single	12	382	22	950
Employment Status				
Employed Full Time	74	382	65	950
Parental Status				
Parents	75	382	69	949
Race				
Non-White/Caucasian	4	382	7	950

Financial Situation

COIs had a larger monthly household income ($t(1328)=2.94$ $p<0.05$)) and a larger total debt ($t(656.8)=3.85$ $p<0.05$) than did NCOIs (cf., Table 21). There were no statistical associations between concerned other involvement and the following finance variables: bankruptcy status, personal monthly income, credit card debt, overdue bills, gambling related debt.

Table 21 Statistically Significant Financial Situation by Concerned Other Group

	COI	N	NCOI	N
Income	**Mean (SD)**		**Mean (SD)**	
Monthly Household Income	$2,844 (2,313)	381	$2,326 (3,111)	949
Debt				
Total	$43,749 (48,979)	381	$32,358 (46,734)	935

Delinquency

As Table 22 shows, NCOIs tended to report more problem behaviors than COIs. Specifically, they reported more jobs lost due to gambling ($t(940.2)=-2.0$ $p<0.05$) and exceeded COIs on arrest variables (past year arrests $t(884.2)=-2.16$ $p<0.05$; gambling arrests $t(1199.4)=-2.87$ $p<0.05$; ever incarcerated $\chi^2(1)=6.66$ $p<0.05$). These differences might be due to the uneven

gender distribution within involvement groups. There were no statistical associations between concerned other involvement and the following variables: days of work missed due to problem gambling, lifetime arrests, non-gambling arrests.

Table 22 Statistically Significant Delinquency by Concerned Other Group

	COI		NCOI	
Delinquency	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Jobs Lost due to PG	0.18 (0.71)	366	0.28 (1.0)	890
Past Year Arrests	0.11 (0.48)	379	0.18 (0.62)	943
Gambling Arrests	0.01 (0.39)	379	0.18 (0.71)	943
Ever Incarcerated	%		%	
Yes	15	382	21	949

Gambling

Concerned other involvement was not a good predictor of gambling behavior. However, NCOIs did report a larger amount lost in any one week during the six months prior to admission ($t(1328.8)=-2.21$ $p<0.05$) (cf., Table 23). There was no association between concerned other involvement and the following gambling variables: family acceptance of gambling, frequency of gambling in past 30 days, total lost weekly, percent lost legally, percent lost illegally, money spent on casino, money spent on slots, money spent on keno, money spent on video poker, money spent on non-casino cards, money spent on bingo, money spent on scratch tickets, money spent on lotteries, money spent on racetrack, money spent on sports betting, money spent on stocks, money spent on other gambling.

Table 23: Statistically Significant Gambling Characteristics by Concerned Other Group

	COI		NCOI	
Losses	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Most Lost in One Week in Past 6 Months	$1,555 (2,166)	382	$2,017 (5,460)	949

Health Behaviors

COIs were more likely to have health insurance ($\chi^2(1)=6.06$ $p<0.05$) and less likely to report previous treatment for a drug or alcohol problem ($\chi^2(1)=7.08$ $p<0.05$) (cf., Table 23). Again, these results might stem from gender differences in involvement groups. There was no significant difference between concerned other involvement and the following health variables: prior help sought, tobacco use, alcohol use, illicit drug use, prescription drug abuse, food abuse, compulsive work, compulsive sex, compulsive shopping, violence, self-harm, GA meetings/month.

Table 24: Statistically Significant Health Behaviors by Concerned Other Group

	COI		NCOI	
Health Insurance	**%**	**N**	**%**	**N**
Yes	78	382	71	949
Prior Drug or Alcohol Treatment				
Yes	15	382	22	949

3.3.7 Service Patterns

To examine how service might vary as a consequence of individuating variables (e.g., gender or treatment history), we collated the aggregated service records of identified clients with the admission/placement records of identified clients. This resulted in 2,730 records. Of these, 2,356 were for identified gamblers. As Figure 7 shows, nearly two-thirds of the identified gamblers (64%) received individual counseling and nearly half received group counseling (45%). Less than 10% of the gamblers had family counseling and roughly 11% had continuing care (CC).

Figure 7 Percent of Gamblers Receiving Service

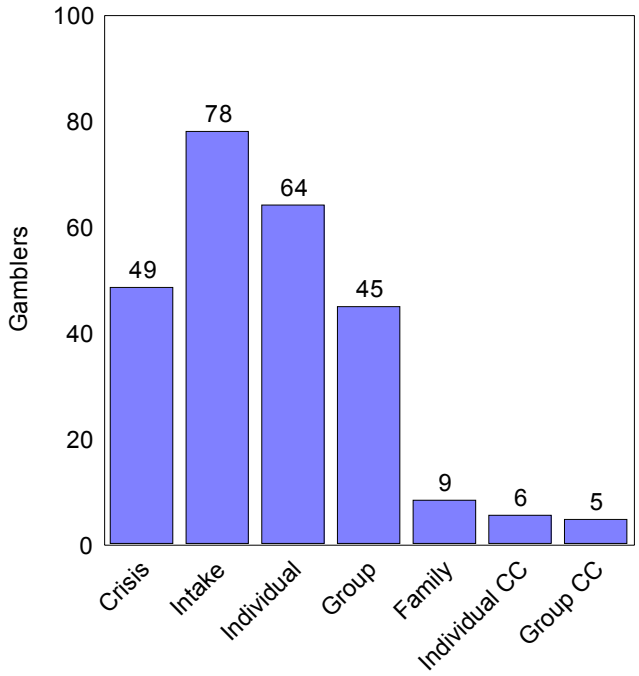


Table 25 summarizes the total number of identifiable gamblers who received each particular type of service: individual, family, and group counseling, and individual and group continuing care for each of the groups compared by individuating characteristics. Being female and having a history of previous treatment for gambling problems related to receiving more individual counseling (gender $\chi2(1)=23.0$; previous treatment $\chi2(1)=42.64$) and group counseling (gender $\chi2(1)=11.27$; previous treatment $\chi2(1)=29.83$). People previously treated also received more continuing care group sessions ($\chi2(1)=4.94$) and family counseling sessions ($\chi2(1)=4.59$). More gamblers who had concerned others involved in treatment had group counseling ($\chi2(1)=9.24$) and this COI group had the highest proportion receiving family counseling ($\chi2(1)=337.54$). Interestingly, they were also the group that was most likely to receive individual continuing care ($\chi2(1)=23.57$) and group continuing care ($\chi2(1)=33.94$) services.

Table 25 Proportion of Gamblers by Service by Individuating Group

	Counseling			Continuing Care	
	Individual	Group	Family	Individual	Group
Gender					
Male (N=1371)	60.2	42.2	8.7	6.1	4.8
Female (N=985)	69.8*	49.1*	8.3	5.1	5.0
Previous Treatment for Gambling Problems					
Yes (N=480)	77.3	55.8	11.0	7.3	6.9
No (N=1858)	61.3*	41.9*	8.0*	5.3	4.4*
Concerned Other Involved					
Yes (N=384)	91.1	69.0	38.8	13.3	13.0
No (N=953)	93.3	60.1*	2.0*	5.5*	4.2*

* = $p<0.05$.

There were no differences between the groups in the average length of sessions except for the groups defined by whether concerned others were involved or not. The length of continuing care counseling was mixed. Gamblers with concerned others had longer individual continuing care sessions ($t(101)=2.11$) but shorter group ($t(88)=-3.31$) sessions compared to gamblers without a concerned other involved (Table 26).

Table 26 Mean minutes per session by type of service

	Counseling			Continuing Care	
	Individual	Group	Family	Individual	Group
Gender					
Male	67.70	110.72	77.10	60.17	99.21
Female	68.27	112.73	80.60	60.22	94.28
Previous Treatment for Gambling Problems					
Yes	68.21	111.35	81.08	95.30	43.59
No	67.92	111.61	77.61	97.84	37.72
Concerned Other Involved					
Yes	68.09	111.54	77.11	63.67*	89.24
No	69.14	110.62	78.03	57.07	103.94*

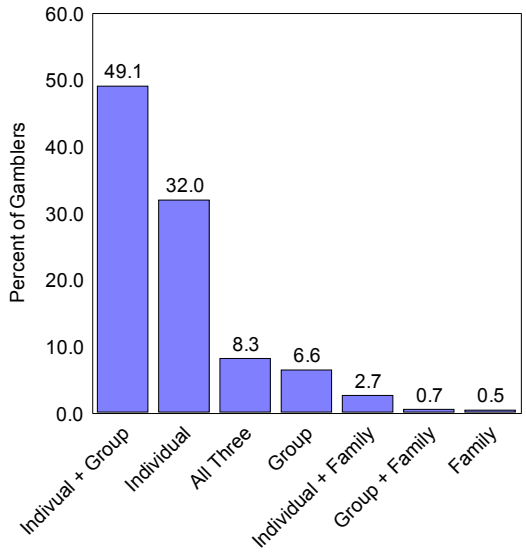
* = $p<0.05$.

In addition to the quantity of services received, we also examined the patterns of services received. We identified seven discrete service patterns of individual, group, and family counseling: (1) individual counseling only, (2) group counseling only, (3) family counseling only, (4) individual and group counseling, (5) individual and family counseling, (6) group and family counseling, and (7) all three: individual, group, and family counseling. Individuals in these groups might also have received continuing care.

Figure 8 shows the percent of gamblers receiving each pattern of services. The most fre-

quent pattern of services was a mix of individual and group counseling followed by treatment with only individual counseling. These two patterns encompass 80% of the IGTP participants' treatment programs.

Figure 8 Gamblers by Service Pattern



We performed an analysis parallel to the type of services received comparing service patterns across groups defined by gender, previous treatment, and concerned other involvement. Because the number of gamblers who received family counseling was small, we combined the service patterns involving family counseling into a single group before conducting the analysis. Table 27 shows that the pattern of services did not differ across gender. Previous treatment for gambling problems was associated with more patterns of service that included both individual and group counseling ($\chi^2(3)=8.11$). The involvement of concerned others resulted in services that included family counseling for 39% of the gamblers in this group ($\chi^2(3)=336.99$). While this is a large concentration of a relatively rare pattern, given the concerned others' availability and willingness to participate, we might expect the prevalence of family counseling to be even higher.

3.3.8 Summary

The differences between men and women identified gamblers were consistent with other research that indicates that women begin to gamble at a later age but proceed more rapidly to treatment. Among IGTP participants women on average began gambling 10 years later than men but reported that gambling became a problem two years sooner after they began gambling. However, the proportion of women who had received prior treatment for gambling problems was only half that of men. Women gamblers lost less money; the most money they lost in a week was only 60% of the money lost by men. The average woman spent 75% of her time gambling on slot machines. Men and women did not have different patterns of counseling services received.

Table 27 Prevalence of Gambling Patterns

Category (N)	Individual	Group	Individual + Group	Any Family	Significance
Gender (N)					
Male (905)	32.5	7.3	47.1	13.1	NS
Female (737)	31.5	5.7	51.7	11.1	
Previous Treatment					
Yes (389)	28.3	4.1	54.0	13.6	P < .05
No (1,237)	33.5	6.5	48.0	12.0	
Concerned Other Involvement					
Yes (384)	19.8	4.2	37.2	38.8	P < .01
No (942)	38.9	5.6	53.5	2.0	

NS = not significant

Our analyses indicated that IGTP participants who reported previous treatment for gambling problems were not different from other gamblers in terms of their current gambling expenditures. They had 50% more gambling debt at admission and one in three had declared bankruptcy compared to one in five other gamblers. More participants with a treatment history had lost a job because of gambling. On average they were two years younger when they started gambling, two years younger when they recognized that they had a gambling problem, but it took them two years longer to enter the IGTP program. The delay would be consistent with a history of previous treatment and the fact that they had significantly more attendance at GA meetings. A previous treatment experience was related to an increase in participation in treatment as reflected in the finding that more treated gamblers received both individual and group counseling.

There were proportionately fewer women (10%) than men (18%) who had concerned oth-

ers involved in their treatment. Generally, the presence of a concerned other was related to fewer risks for gambling problems. Gamblers with concerned others were less likely to be single, more were employed full-time and had been employed for a greater portion of the six-months before admission. Their household incomes were higher as was their total debt, but the amount of debt due to gambling was not different. They were less likely to have lost jobs due to gambling, been arrested for gambling-related offenses, and been incarcerated. The most money they lost in a week was significantly lower. They were more likely to have health insurance and less likely to have been treated for substance abuse problems. As expected, gamblers with concerned others had the highest proportion (39%) with family counseling in their service mix.

3.4 Post-Program Results

This section presents the findings from analyses of information collected from identified gamblers at discharge and follow-up. The data collection forms used for these phases of the IGTP are in Appendix B. Some discharge information was completed by the treatment providers for IGTP participants who were not interviewed. This procedure captured the information on participation by concerned others that allowed the analyses reported in the previous section. As described below, information was collected on relatively few identified gamblers. At discharge, 474 of the 2,356 identified gamblers (20%) completed interviews, and at follow-up, 208 (9%) completed interviews. The smaller number of interviews was due in part to the IGTP protocol (see Appendix A) that required complete information from only certain subgroups of participants. Readers should not extrapolate the findings from the analyses presented below to all IGTP participants.

3.4.1 Discharge

In the IGTP, counselors could discharge clients for eight different reasons: (1) program completion (whole), (2) substantial program completion (partial), (3) referred outside, (4) program decision due to lack of progress, (5) client left, (6) incarceration, (7) death, and (8) other. There were 1,985 discharge records in the study data base. The IGTP procedures required counselors to record only the information on the reason for discharge and participation of concerned others for clients who left the program, were incarcerated or died. In 1,105 of the 1,700 identified records the reason for discharge was that the client left the program. A few were incarcerated (27) and three died (cf., Table 28). Consequently, two-thirds (1,135 of 1,700) of the discharge records did not include client characteristics at time of discharge.

Table 28 Reason for Discharge from Identified Gambler Records

	Proportion of Discharges	
Reason For Discharge	**N**	**%**
Left, Jailed, Died	1,135	67
Completed Program	290	17
Mostly Completed Program	183	11
No Progress	41	2
Other	26	1.5
Referred to Other Treatment	25	1.5
Total Records	1,700	100

Differences between First and Last Discharge

The 565 discharge records provided by 524 identified gamblers included reports on gambling since admission and program satisfaction. A few gamblers had multiple discharges: 35 (7%) were discharged twice and three (less than 1%) discharged three times. For the 38 identified gamblers with multiple discharges, we compared the gamblers' responses to 54 items obtained at the first discharge interview to the responses at the last interview. To protect against the possibility of spurious significant findings due to a large number of statistical comparisons, we used a higher level of statistical significance (i.e., $p < .01$), rather than the conventional $p < 0.05$. Only two of the 54 items had an average difference that was not likely to have occurred by chance (paired t-test, $p < .01$); gamblers on average had more total household debt at the second discharge, $41,745, than at their first discharge, $28,463 ($t(37)=-3.82$ $p<0.05$). The amount of the debt attributed to gambling

was similar at first and last discharge, $9,800 and $10,300 respectively. The change in total debt was likely due to the greater willingness to commit to debt for household purchases after the first course of treatment, and does not appear to indicate a difference in gambling-related behavior over treatments. The other significant difference was whether a concerned other was involved in treatment. The gamblers with multiple discharges were more likely to have a concerned other involved at the first treatment (45%) than the last treatment (36%) ($t(37)=2.89$ $p<0.05$). The comparison between treatment discharges found no reason not to select the first or the last discharge as typical of behavior at discharge. We merged the information from the last discharge record into the collated gambler information base. The decision was based on the slightly larger fraction of completed programs in later treatments.

Differences at Baseline between Gamblers with Single or Multiple Discharges

To determine if individuals with multiple discharges differed significantly at baseline from individuals with a single discharge, we compared the admission information for the two groups. When we collated the discharge information, we found that 50 identified gamblers did not have baseline information from admission[10]. The analysis of the differences between gamblers with single and multiple discharges is based on the 437 gamblers with single discharges and the 37 gamblers with multiple discharges. Using the level of statistical significance appropriate to the large number of items to be compared ($p < .01$), we found significant differences between the groups for two of the 70 variables tested. There was only a single procedural difference between the groups defined by number of discharges. Gamblers with multiple discharges were first admitted earlier in the program ($t(158)=1.97$ $p<0.05$). The mean month of admission was 15 months after the start of the IGTP, significantly earlier than gamblers with a single discharge who came into the program an average of six months later. We considered this difference procedural because a greater time at risk would be coincident with multiple admissions and discharges. The other difference was that gamblers with multiple discharges spent a smaller fraction of their time (1% on average) playing scratch tickets than did gamblers with only a single discharge (6%) ($t(439.1)=4.77$ $p<0.05$). Neither of these differences suggests a systematic difference between persons grouped by number of discharges.

[10] Many of these participants may have entered the IGTP before July 1997; data collected prior to the GTRS implementation was not available for analysis.

Table 29 Discharge Information for Interviewed Identified Gamblers by Discharge

	Proportion of Discharges		Did Not Gamble in the last 30 days		Client-reported Satisfaction with IGTP	
Reason For Discharge	**N**	**%**	**N**	**%***	**N**	**%****
Completed Program	237	50	235	97	235	97
Mostly Completed Program	160	34	159	82	158	95
No Progress	35	7	31	45	33	36
Other	22	5	18	78	18	100
Referred to Other Treatment	20	4	20	55	19	97
Total Records	474	100	463	86	463	92

* Percent of gamblers in each discharge category who reported not gambling in the last 30 days.
** Percent of gamblers who rated program as very beneficial or beneficial.

Characteristics at Discharge

Most of the identified gamblers (84%) who were interviewed at discharge had completed or substantially completed their treatment program. Table 29 summarizes these results. Nearly half (45%) of the gamblers considered to lack progress did not gamble in the 30 days previous to discharge.

Gamblers who completed their treatment program were most likely to have abstained from gambling in the last month. With the exception of gamblers discharged by the program for lack of progress, clients were nearly unanimous in rating the IGTP as beneficial.

At discharge, identified gamblers reported reasonably large average weekly losses of about $120 during treatment and the most money lost in a week averaged twice the usual losses. Relatively few (3%) attended Gamblers Anonymous meetings between admissions and discharge and about one in eight gamblers declared bankruptcy during the same period.

Table 30 Other Discharge Information for Interviewed Identified Gamblers

Variable	Completers (N = 237)*		Partial Completers (N = 160)*		Total	
Item (Since Admission)	Mean	SD	Mean	SD	Mean	SD
Total $ Lost Weekly	152	1,639	72	275	120	1,279
Most $ Lost in One Week	268	1,942	205	693	242	1,563
	Percent		Percent		Percent	
Lost Job due to Gambling	6		3		5	
Attended Gamblers Anonymous	3		2		3	
Declared Bankruptcy	14		10		12	
Used Tobacco	61		50		57	
Used Alcohol	26		36		30	
Abused Food	5		8		6	
Compulsive Work	10		11		10	
Compulsive Sex	2		5		3	
Compulsive Spending /Shopping	2		4		3	

* Ns for specific item vary slightly due to occasional missing observations.

Gamblers who completely or substantially completed their treatment program dominate the available information at discharge. As Table 30 summarizes, there were no significant differences across an array of important gambling and addiction-related variables between groups defined by the extent to which they completed their treatment program. We did not include the items on illicit drug use, misuse of prescription drugs, physical violence, or physical harm to self in our analyses because only 1 percent or fewer of the gamblers reported involvement with these activities.

3.4.2 Preliminary Follow-up

There were 489 follow-up records in the final dataset. As shown in Table 31, most of the interviews (79%) were conducted with clients who had completed all or substantially all of their treatment programs. The IGTP expected that "Follow-up records will be required for Admit Gambler Clients … when the discharge [status] was ... completed treatment". The IGTP target population for follow-up interviews was the 397 gamblers with a discharge status of completing or substantially completing the program (i.e., the clients presented in the previous table). Follow-up interviews were completed with 42% (N=165) of them. The follow-up rate was higher for those who completed all treatment compared to the gamblers who completed most of their treatment program. Twenty percent of the follow-up interviews were conducted with persons with other reasons for discharge. Most of these were from the large pool of gamblers who left without completing a discharge interview.

Some of the records (N = 182) recorded failed attempts to complete an interview. The most common reason for a failed follow-up was that the client could not be located (N = 143). There were 28 records recording the refusal of the client (N = 24) or another household member (N = 4) to participate. A few of the 307 completed interviews (N = 27) were with collateral informants. We did not use these records in our analysis because we lacked a firm basis for the validity of the information provided by people other than the client gamblers. Five clients had multiple follow-up records. One of these multiple records was due to an inadvertent duplicate record. The other four had been followed up at different times. Consistent with strategy used for multiple discharges, we retained the latest information for analysis.

When we collated the follow-up information into the master file of identified participants, we discovered that there were follow-up records for

27 participants who had no baseline data.[11] Consequently, the follow-up dataset comprised entirely of gamblers with baseline admission information included 208 identified gamblers.

Table 31 Follow-up Interviews with Gamblers by Discharge Reason

Discharge Reason	% of Followed (N)	% of All Identified Gamblers (N)	% of Discharge Type Followed
Completed Treatment	52 (109)	10 (237)	46
Substantially Completed	27 (56)	7 (160)	35
Left/No Discharge Record	16 (33)	80 (1,882)	2
No Progress	3 (7)	1 (35)	20
Referred Out	1 (1)	1 (20)	5
Other	1 (2)	1 (22)	9
Total	**100 (208)**	**100 (2,356)**	**9**

The follow-up interviews represent only 9% of the total identified gamblers and disproportionately represent IGTP participants who completed their program. This is not a representative sample and the results of our analysis of the six-month post-treatment characteristics of these respondents will not describe those of IGTP in general. We provide an analysis of the three major discharge groups with this important caveat in mind. Our presentation of the results from this special sample includes a description of the overall sample as well as comparisons of differences across these groups.

Characteristics of IGTP Participants during the Period from Discharge to Follow-up

Table 32 shows the distribution of behaviors and experience reported for the period between discharge and follow-up for the three discharge groups, separately and combined. At follow-up, the average gambling involvement was relatively modest for a group of people with a history of problem gambling. The average usual weekly losses were about $37 and the largest weekly loss averaged less than $100. The low averages result from an overall reduction in gambling. Most (61%) followed-up gamblers had abstained from gambling since discharge. The period from discharge to follow-up was a time when few gamblers missed work or lost jobs due to gambling and many took steps to help themselves. Forty-two percent (42%) attended Gamblers Anonymous meetings and 19% had received treatment for substance abuse.

[11] Many of these participants may have entered the IGTP before July 1997; data collected prior to the GTRS implementation was not available for analysis.

Table 32 Follow-up Information for Interviewed Identified Gamblers

Variable	Completers (N = 109)*	Partial (N = 56)*	Left (N = 33)*		Total (N = 198)
	Mean (SD)	Mean (SD)	Mean (SD)	Sig.**	Mean (SD)
Amount $ Lost Weekly	27 (82)	28 (50)	81 (138)	P< .01	37 (89)
Most $ Lost In a Week	65 (217)	118 (303)	173 (400)	ns	98 (281)
	Percent	Percent	Percent	Sig.**	Percent
Bet since Discharge	26	51	64	P<.01	39
Gambled on Slots	12	25	45	P<.01	21
Missed Work	1	4	12	P< .05	4
Lost Job	0	0	6	ns	1
IGTP Beneficial	99	98	82	P<.01	96
Declared Bankruptcy	8	2	3	ns	6
Gambling Arrest	0	2	0	ns	<1
Attended GA meetings	48	42	24	ns	42
Prior Substance Treatment	20	16	18	ns	19
Used Tobacco	57	56	64	ns	42
Used Alcohol	29	51	36	ns	54
Abused Food	3	11	6	ns	6
Compulsive Work	7	9	18	ns	10
Compulsive Sex	1	2	3	ns	2
Compulsive Spending /Shopping	4	4	3	ns	4

* Ns for specific item vary slightly due to occasional missing observations.
** Two-tailed (non-directional hypotheses) tests, where ns = not statistically different.

The level of many of the improvements was related to status at discharge. There were fewer abstainers as the level of treatment completion diminished. Gamblers who left the program gambled significantly more money, spent proportionately more time gambling on slots (the most popular game among IGTP participants) and missed more time at work. Though not statistically significant because of the low frequency of occurrence, it is interesting to note that the gamblers who left were the only group with people who lost their jobs due to gambling. As Table 33 shows, when we compared the gambling losses and time spent at various games for discharge groups using only those people who gambled since discharge there were no significant differences among groups.

Table 33 Follow-up Information for People Who Gambled Since Discharge

Variable	Completers (N = 28)	Partial (N = 28)	Left (N = 21)		Total (N = 77)
	Mean (SD)	Mean (SD)	Mean (SD)	Sig.	Mean (SD)
Amount Lost Weekly	106 (133)	52 (59)	128 (156)	ns	92 (122)
Most Lost In a Week	251 (372)	215 (385)	272 (478)	ns	243 (403)
	Percent	Percent	Percent		Percent
Gambled on Slots	12	25	45	ns	47

ns = not statistically different.

Changes from Baseline to Follow-up

The collated data base permits the conversion of the relatively low levels of gambling losses and debt due to gambling into changes from baseline levels. Table 34 presents differences from baseline to follow-up in terms of absolute dollars and percent change. We also included changes in monthly household and personal income. In most instances, income changed modestly, an indication that the reduction in gambling debt was obtained from limiting debt rather than covering a larger portion of gambling debt with increased income. The percent change in individual income could not include people who had no income at baseline because it is not possible to divide by zero.

Table 34 Differences From Baseline to Follow-up by Discharge Status

Variable	Completers (N = 109)*	Partial (N = 56)*	Left (N = 33)*	Total (N = 198)*
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Weekly Loss	446 (820)Δ	654 (1,483)Δ	273 (283)Δ	473 (994)
Most Lost In a Week	65 (217)Δ	118 (303)Δ	173 (400)Δ	98 (281)
Days Missed Work	2.0 (5.9)Δ	1.9 (7.4)	0.0 (1.2)	1.6 (5.9)
Gambling Debt	7,951 (24,267)Δ	7,663 (27,755)Δ	2,560 (4,464)Δ	6,978 (23,322)
Personal Income	-160 (3,312)	240 (612)Δ	273 (721)Δ	25 (2,500)
Household Income	-465 (6,023)	347 (991)Δ	114 (980)	140 (4,524)
Percent Change from Baseline				
Weekly Loss	85 (63)Δ	88 (25)Δ	65 (60)Δ	82 (54)
Most Lost In a Week	91 (32)Δ	78 (94)Δ	41 (200)	91 (32)#
Days Missed Work	100 (0)	93 (27)Δ	61 (76)	91 (36)#
Gambling Debt	36 (154)Δ	43 (74)Δ	47 (58)Δ	40 (123)
Personal Income	-14 (56) Δ	32 (95) Δ	22 (60)	21 (70)
Household Income	-15 (52) Δ	18 (49) Δ	7 (39)	15 (49)

* Ns for specific items vary slightly due to occasional missing observations.
Δ Paired t-test of within group change was statistically significant ($p \leq .05$ two-tailed).
Statistically significant difference ($p \leq .05$ two-tailed) across discharge groups.

The percent changes in income are necessarily conservative. The changes are shown in the direction of benefit (i.e., losses and debts are decreases from baseline and incomes are increases from baseline).

As Table 34 summarizes, the IGTP participants who were interviewed at follow-up showed very different gambling expenditure and debt regardless of discharge status. There were no significant differences among the groups on the raw change scores. The changes were statistically significant within all groups except for number of days missed due to gambling, which was reduced significantly only for the program completers. In absolute dollars, the completers showed a small, not statistically significant decline in individual and family income.

When expressed as a percent of baseline, the changes at follow-up indicated large decreases in gambling expenditures for completers and partial completers. Those groups of participants reported expenditures that were 85% to 88% lower than expenditures at baseline. Even the group that left before completing treatment indicated that their usual losses were down by nearly two-thirds (65%). The percent changes, which adjust for the relative differences among respondents in absolute dollars, showed significant treatment benefits on all tested measures for the completers and partial completers. The number of days of work missed due to gambling could not be tested because no completers missed work and the measure had no variance. The fact that no one in this group missed days of work is clearly clinically significant.

3.4.3 Summary

Relatively few gamblers were interviewed at the time of discharge and follow-up, nor were the experiences of these gamblers representative of all program participants. The IGTP procedures require comprehensive post-program information to be collected on only a subset of participants; consequently, gamblers who completed or substantially completed their treatment program dominate the available information. This subset represents relatively few gamblers overall; discharge information was obtained for 20% and follow-up for 9% of gamblers.

Seven percent of gamblers had multiple discharges. Our analyses uncovered two significant differences between characteristics at the first and second discharge. At the second discharge, there was greater concerned other involvement and more total household debt. As stated earlier, there was no parallel change in gambling debt indicating that the change in total debt was likely due to the greater willingness to commit to debt for household purchases after the first course of treatment, and does not appear to indicate a difference in gambling-related behavior over treatments. We found no evidence to suggest a systematic difference between gamblers with multiple discharges and those with a single discharge.

Counselors could discharge clients for eight different reasons. The most frequent reason for discharge was that the participant had left the program (65%). Only 17% of participants completed the program, while an additional 11% substantially completed the program. Most of the identified gamblers (84%) who were interviewed at discharge had completed or substantially completed their treatment program. Nearly every member of this group (97%) had abstained from gambling in the last month. Almost half (45%) of the gamblers discharged from the program due to a lack of progress also abstained, indicating that they too modified their gambling behaviors as a result of their involvement in the program. Perhaps further examination needs to be given to why counselors thought they weren't progressing or whether the reason was that they had already gathered the tools and skills they needed to successfully alter their gambling behavior.

Similar to discharge, most of the follow-up interviews (79%) were conducted with clients who had completed all or substantially all of their treatment programs in accordance with IGTP procedures. As anticipated, gamblers experienced an overall reduction in gambling participation, debt and expenditures. Most (61%) gamblers had abstained from gambling since discharge; there were fewer abstainers as the level of treatment completion diminished. Completers reported expenditures that were 85% lower than expenditures at baseline; partial completers reported similar improvements (88%). Gamblers who left the program also demonstrated a reduction in expenditure (65%), albeit less significant than those who continued on with the program. This indicates that gamblers received treatment benefits commensurate with their level of treatment completion.

Relatively few (3%) gamblers were attending Gamblers Anonymous meetings at the time of discharge, however, this number had jumped to 42% by follow-up. In the absence of contact with the IGTP, self-help organizations might provide a supportive structure to maintain the gains made during the treatment program and prevent relapse. In addition to participating in GA, 19% of the identified gamblers had received treatment for substance abuse in the period between discharge and follow-up. This provides further evidence of the high comorbidity of problem gambling and substance abuse. This additional treatment might bolster improvements in gambling behavior resulting from the IGTP, as well as having positive ramifications in other areas.

While clients who either substantially or fully completed the program were nearly unanimous in rating the IGTP as beneficial, gamblers discharged by the program for lack of progress were less satisfied (36% reported satisfaction). As treatment participation is voluntary, it follows that clients satisfied with the treatment they are receiving would choose to continue until completion. The more intriguing group is comprised of those who left the program early. If client satisfaction is linked to perceived improvement in gambling behavior, these might be clients who the program has not adequately provided for in current methods of treatment. It is interesting to note that 36% of those who chose to leave the program early were nevertheless satisfied with their treatment; this reinforces the possibility that some clients left because they felt they had received the necessary counseling to successfully handle their gambling addiction; follow-up analyses do show lasting treatment gains in this group.

4 Conclusions and Implications for Best Practices

The treatment for gambling related disorders is at an early stage of development. This youthfulness has stimulated an important dialogue between (1) those who encourage the development of best practices to assure treatment efficacy guides the delivery of clinical services and (2) others who suggest that, in the absence of more clinical research, that it is premature to limit practice to one or more specific protocols. These concerns are very important for both sponsors of gambling treatment (e.g., IDPH) and those who receive services from gambling treatment providers. Without practice guidelines, clinicians might apply insufficiently efficacious treatment devices or unevenly apply efficacious treatments. Conversely, with the imposition of premature practice guidelines, treatment activities will become narrow because practices will either remain undeveloped (i.e., those destined to become best as these mature) or not even considered because of the need to sustain the existing "best practices" guidelines.

This debate is beyond the scope and purpose of this report. However, it does represent a very important concern. Treatment planners should use the findings and suggestions contained in this report to shape and consider treatment options. It would be an error to think that the findings included in this report definitively determine the practice activities applied to gambling related problems. Consequently, treatment providers should consider the findings reported here and the discussion that follows about the implications for best practices a buffet of options to consider and prioritize for the IGTP.

The results of the IGTP evaluation provide unique insight into those areas of practice that are most relevant for Iowa practitioners. The preceding evaluation, based on four years of IGTP practice, presented the evidence-base for developing best treatment practices. Doing so will allow clinicians and others working in the IGTP to augment their expertise with information directly relevant to delivering care to Iowans with gambling-related problems. It is likely that these insights will be instructive for practitioners in other areas of the country as well. Appendix E: Practice Guidelines for Treating Gambling-Related Problems—An Evidence-Based Treatment Guide for Clinicians, presents general guidelines for best practices developed, in part, for this study. These suggestions include both practice principles in general and practice guidelines that are more specific to Iowa. Since the field of treatment for gambling disorders is young, we encourage clinicians to select the areas of practice that are most relevant to their treatment responsibilities from each of these sources and to evolve "best practices" most useful for their clinical work.

This section considers some of the current evidence from the evaluation of the IGTP within the context of the treatment system as a whole. Instead of suggesting treatment guides for individual providers, this discussion targets the entire IGTP system. We neither presume to be comprehensive about all possible clinical roles and insights nor do we have sufficient data to shape best practices in all of these treatment areas. We do expect, however, that the discussion will help guide further applications of the practice guidelines and study results.

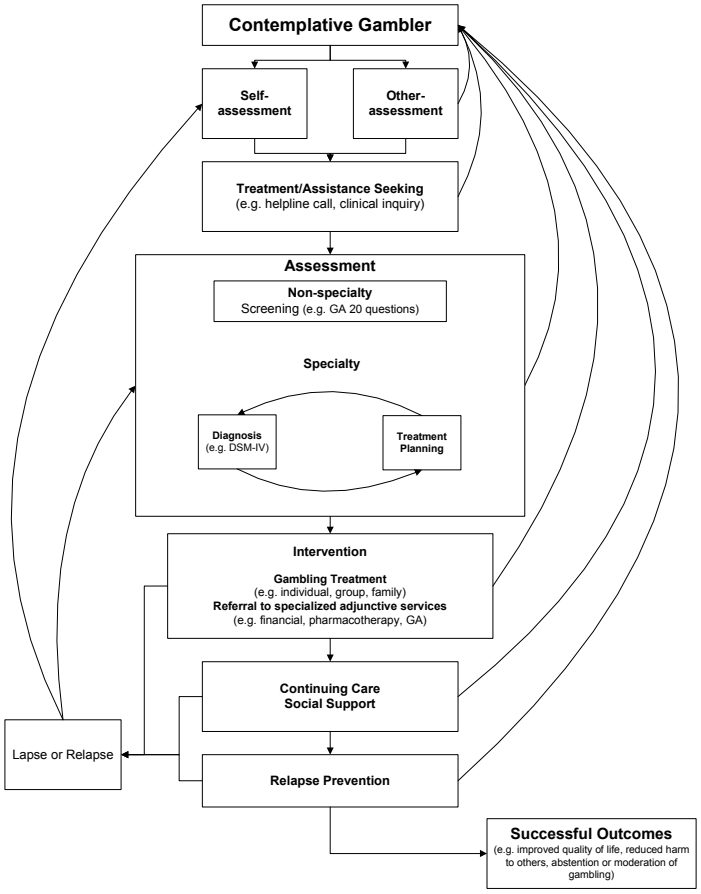
Ideally, practice guidelines should provide a conceptual map to the conduct of care through the entire sequence of clinical events that are associated with gambling treatment, for example, the activities that begin with concern for unhealthy gambling-related behaviors and ideally end with successful remediation of the identified and associated problem(s). Consequently, we organized the discussions in this section to generally follow the path to recovery as illustrated in Figure 9. It is important to note that we intend this figure to represent pathways involving treatment. Some disordered gamblers will recover without ever seeking formal treatment.

4.1 Treatment Progression

Figure 9 provides a conceptual map of the path from problem gambling behavior to recovery. As the arrows in the figure illustrate, the path to recovery does not always follow a straight course; at any point during the treatment process, gamblers involved in treatment can cycle back to an earlier stage.

Treatment begins when contemplative gamblers determine, either by self-assessment or other assessment, that they might have a gambling problem. After seeking preliminary assistance for a gambling-related problem by making a helpline call or other inquiry, help seekers might decide not to continue any further in the process. In this case, they return to the state of

Figure 9 The Natural History of Treatment for Gambling Disorders



contemplative gambler. Alternatively, help seeking gamblers may decide to take the next step and undergo a clinical assessment to evaluate their problem. In this instance, the gamblers might then enter into a treatment program and possibly be referred to specialized adjunctive services, such as financial counseling. At the completion of the treatment program, gamblers can elect to participate in continued care to maintain positive changes and prevent relapse[12]. A gambler's ability to maintain these gains defines a successful outcome. If a gambler does relapse, he or she might re-enter the treatment pathway at any of the stages illustrated in Figure 9.

4.2 The IGTP and Brief Therapy

The IGTP provided crisis intervention services to an increasing number of Iowans over the four years of study. The average monthly number of crisis intervention service records for each successive year was 71, 99, 130, and 124. On average, a crisis intervention session lasted more than a half-hour (37 minutes). The IGTP program features that might encourage contact and result in the large number of crisis interventions include two primary features: (1) publicizing and staffing a continuously available helpline and (2) allowing Iowans to receive crisis services anonymously.

The crisis contacts provide an excellent opportunity for the IGTP to offer solution-focused brief therapy (SFBT), described in the appended Treatment Guidelines as a promising intervention for gambling treatment (Appendix E: Practice Guidelines for Treating Gambling-Related Problems—An Evidence-Based Treatment Guide for Clinicians). Treatment delivery cost considerations and the large number of crisis contacts suggest that brief therapy is a potentially attractive and important treatment option with high impact.

Therapists could apply SFBT to both gamblers and concerned others. The central frame is brief treatment offered either as a single contact or a series of brief and intermittent episodes. The structure of the intervention is well suited to the IGTP's methods of attracting people to crisis intervention services and providing treatment.

In addition to brief therapy, the IGTP should consider the use of self-help guides for crisis contacts. For example, the Harvard Medical School's Division on Addictions and the Massa-

[12] IGTP clients receiving IGTP continuing care services are still considered in treatment status, however, this is not true of all treatment programs; therefore, we have distinguished this stage.

chusetts Council for Compulsive Gambling have developed a "Tool Kit" for distribution to people who contacted the Massachusetts Council's hotline. This type of resource provides callers with an enduring hard-copy of information and strategies designed to help them acquire and maintain non-problematic gambling behaviors including abstinence from gambling. Self-help guides also can be helpful and instructive for concerned others. The distribution of materials to support healthy gambling decisions could be included as part of the IGTP crisis intervention procedure.

4.3 Need for Treatment and Met Demand for Services in Iowa

According to the survey conducted by Volberg in 1995, the prevalence of current-year adult probable pathological gamblers was 1% (±0.5%)13. The recent Year 2000 census counted 2.1 million adults living in Iowa. Applying Volberg's 1995 estimate to the current population yields an estimated 10,500 to 31,500 adults who would have benefited from treatment for gambling-related problems in the last year.

During the year closest to the survey, fiscal year 1998, there were roughly 658 self-reported gamblers who received crisis intervention services from the IGTP. The number is an approximation because it includes individuals who chose to remain anonymous. Anonymity allows repeated contacts by the same person to go unrecognized as repeats. In addition to individuals who received crisis intervention services, there were another 364 identified Iowans admitted to treatment who had no record of ever receiving crisis intervention services. It is possible that some of these people might have received services anonymously. Our best estimate of the total number of people who sought and received treatment from the IGTP for gambling-related problems in the last year is 1,122 adults, the sum of people receiving crisis intervention and non-duplicated admissions to the IGTP.

During the first year of the program, the IGTP provided treatment to between 3.6% and 10.7% of the 1995 survey estimate of the number of Iowans in need of treatment. A confident estimate of the proportion of disordered gamblers in need of treatment who receive treatment is not yet available in the literature. However, Ford and Schmittdiel (1983) have estimated the need for treatment in other areas including mood and substance use disorders has been consistently estimated to be 20% of total need. A recent study using participants in the National Comorbidity Study (Mojtabai, Olfson, & Mechanic, 2002) confirmed the persistence of the one-in-five estimate with its finding that 19% of the 1,792 people with a last year DMS-III-R mood, anxiety, or substance use disorder sought treatment in the last year. The Iowa IGTP information would support the extension of 20% rule to gambling problems under the reasonable assumption that half the pathological gamblers in need of treatment would seek treatment from non-specialty providers and self-help groups.

4.4 The IGTP and Stages of Change

At admission, gamblers identified their source of referral to the IGTP. The most common routes to IGTP participation were helpline conversations, cited by 36% of participants, and self-directed contacts, reported by 28% of participants. All other referral sources were cited by less than 10% of the participants. The most commonly reported referral sources from this group of participants were court and substance abuse treatment programs (7% each). Even this short list suggests that Iowans presenting for treatment are at varying levels of readiness for treatment. The Practice Guidelines discusses several practices adapted to the continuum of readiness; in addition, the guidelines describe motivational enhancement strategies and tactics that hold the potential to improve treatment readiness. More specifically, the Practice Guidelines discuss screening for motivational levels

[13] We base our discussion on probable pathological gamblers because Iowa's Grambling Treatment Program defined people in need of, and eligible for, treatment as people who satisfied any one of three measures, the SOGS, DSM-IV, and GA20. Though the protocol did not explicitly give the SOGS score level that defined need, we assumed the probable pathological level was intended because it is the level consistent with meeting diagnosis using the DSM-IV.

(see Assessing Motivation and Readiness for Change) and the application of the identified stages of change to formulating treatment strategies (see Matching Motivational Strategies to Stages of Change).

The gamblers admitted to the IGTP reported not only a wide range of referral sources but also other characteristics such as previous treatment seeking (21%), previous treatment for substance use disorders (23%), attendance at Gamblers Anonymous (17%), and arrest for gambling-related offenses (9%); these experiences reflect a range of motivations and efforts to change, suggesting the need to adapt treatment practices by matching clinical interventions to stage of change. We suggest that treatment providers with admitted gamblers negotiate efforts to match treatment and then carefully document these efforts in a treatment plan, since it is likely that relapse and other setbacks will require adjustments to this plan. As treatment activities progress, the contemplative status of treatment seekers is subject to revision. Consequently, as treatment seeking gamblers move through the treatment experience, clinicians should repeatedly assess their status and their motivation for change. Similarly, as indicated in the Appendix on Practice Guidelines in the section on "criteria for treatment matching," it is very important to repeatedly evaluate clinical progress to determine whether a more intensive level of treatment is required.

Finally, the IGTP has extensive assessment information that includes the results of screening instruments (e.g., SOGS); however, this data is not included in the IGTP dataset at this time and therefore could not be included in this analysis. Consequently, an empirical assessment of the relationship between the use of screening devices and treatment (e.g., intensity of symptoms or duration of symptom clusters) will require additional evaluation.

4.5 The IGTP and Special Populations

The Practice Guidelines emphasize the need to develop treatments for specific segments of the gambling population. Special population segments represent groups of individuals with particular or distinctive treatment needs. These needs might relate to the influence of culture, gender, age, or socioeconomic status. Alone or in combination, these attributes influence gambling behavior, mental well-being and overall health recovery. Special populations are an emerging area of public health interest from both a prevention and a treatment perspective (Korn & Shaffer, 1999b). As practitioners and researchers gain experience with these diverse groups, improved treatment strategies likely will evolve reflecting scientifically validated research. However, at this early stage of our understanding of gambling treatment, we encourage clinicians to develop enhanced awareness of the complexity and variability of gambling beliefs, practices and vulnerabilities amongst these various peoples. This improved understanding can develop by improving assessment skills specifically and formulation construction in general. Formulation construction provides a succinct conceptualization of the case and thereby guides the development of a treatment plan. A clinical formulation provides a framework for understanding the nature and extent of the presenting problem (Shaffer, 1986a). A psychodynamic formulation (Perry, Cooper, & Michels, 1987; Shaffer, 1986a; Shaffer & Robbins, 1991) provides insight into the nature of the gambler as a person and how each gambler got to be the way they are. By understanding these factors, we expect that clinical practice, treatment programs, service design and research strategies will benefit.

The groups used for the analyses conducted for this evaluation do not include some of the special populations discussed in the practice guidelines generally because some populations were not represented at a sufficiently high rate to allow confident statistical comparisons. To illustrate the value of understanding population segments and as an aid to developing best practices for special groups that might exhibit unique patterns of treatment need, we compared gamblers by gender, history of previous gambling treatment, and the participation of concerned others. Findings specific to these concerns and the implications for their treatment will be discussed below.

4.5.1 Women

Women in Iowa's IGTP reflect the general gambling trends among women observed by scientists recently. Importantly, although traditionally thought to be restricted to men, the prevalence of problem gambling among women is now approaching that of men. In this study, the proportion of identified female gamblers in the IGTP was 42%.

There is evidence in this study to support the perspective that women have distinct gambling behaviors, often described as "escape" gambling. The clinical tradition suggests that they prefer to gamble in casinos and bingo halls that are perceived to be safe. Female gamblers favor games such as slot machines, VLTs and bingo that are not skill-based. Women in this study reported spending 73% of their gambling expenditures on slot machines, a much larger fraction than the 44% reported by men. One clinical interpretation of this preference is that females gamble more to reduce boredom, escape from responsibility and relieve loneliness than they do for excitement, financial gain or pleasure. Another interpretation is that women avoid table games because male players often dominate them. Despite the absence of sufficient evidence to support either these views, these perspectives have endured. More importantly, in the analyses above (See Section 3.3.6), the results show that women begin gambling later in their lives, they are quicker to develop problems due to gambling, and quicker to seek treatment for those problems. Consequently, clinicians should attend to the gender differences associated with assessment and treatment, recognizing that women enter the treatment system under different circumstances than their male counterparts.

In addition to these clinical issues, treatment professionals need to be sensitive to the possible history of trauma, difficult economic realities, and a preference for women-specific treatment settings and programming, for example, women only group formats for counseling.

4.5.2 Treatment History

As previously mentioned, IGTP participants might enter treatment at any one of a variety of stages. There is evidence to suggest that those who report a history of gambling treatment might have dealt with problem gambling for longer than those who did not make such reports; individuals with a history of gambling-related treatment started gambling earlier, developed problems earlier, and reported more elapsed time between the period they developed a problem and their entrance into the IGTP. Having a treatment history also was associated with more gambling debt and an increased likelihood of having declared bankruptcy. Clinically speaking, treatment providers might respond to a history of treatment in several ways: (1) clinicians often think that a history of failed treatment portends poor motivation, chronic problems and ultimately a negative treatment outcome; (2) treatment providers sometimes think that previous treatment reflects higher levels of motivation and an implicit imprimatur for the value of clinical services and then inadvertently favor the client with previous treatment experience; and finally, (3) clinicians can ignore previous treatment as if it were irrelevant to this new help seeking episode. Each treatment episode likely holds a similar probability of success, so clients with previous failed treatment experiences are best considered as simply closer to the end of their journey to recovery. Next, in each of these illustrative instances, countertransference is operating. This circumstance can compromise treatment because treatment providers have injected expectations and beliefs that are not properly part of the clinical relationship into the treatment (e.g., Imhof, Hirsch, & Terenzi, 1984; Imhof, 1991; Maltsberger & Buie, 1974; Shaffer, 1994). Clinical supervision is one vehicle for identifying and dealing with countertransference; consequently, we encourage the IGTP to assure that all clinicians have the opportunity to participate in regular supervisory sessions with experienced treatment providers. Often, a cost effective solution for delivering supervision to treatment providers is to assign junior staff to senior clinicians and then rotate the assignment every one to two years.

4.5.3 Concerned Others

As with other disorders, involving family and significant others in the treatment services provided to disordered gamblers holds the potential

to improve treatment outcomes and sustain behavior changes. The IGTP is sensitive to this need and gambling-related family problems should remain an important issue for clinicians. To illustrate: of the total pool of identified IGTP participants that we analyzed, there were 374 (14%) concerned others. However, information about which gamblers had a concerned other who participated in treatment was available only on the discharge forms for 1,337 gamblers. The IGTP did not link specific concerned others to specific gamblers. Without such a link, we could only compare gamblers with discharge forms showing that a concerned other was not involved in treatment to the 384 gamblers who reported having concerned others in the program. We suggest that the IGTP consider a method for linking information about concerned others and gamblers that will permit more thorough evaluation while still assuring confidentially.

Of the gamblers with concerned others in the IGTP, 39% received family therapy. Of gamblers without concerned others, only 2% received family therapy. The difference reinforces our position that, in the absence of linkage, our strategy of identifying these cases based upon self-reports regarding concerned others was accurate. While the IGTP was structured to include concerned others and provide family and couples therapy, the proportion that received family therapy was relatively small. It is possible that the limited number of discharge records could have influenced these results. In the absence of any strong evidence of bias, however, the results suggest that the IGTP could expand the recruitment of concerned others and provide more services directed to the remediation of negative health and social consequences for family members associated with adult disordered gamblers.

4.6 The IGTP and Complementary Services

The Practice Guidelines in Appendix E: Practice Guidelines for Treating Gambling-Related Problems—An Evidence-Based Treatment Guide for Clinicians include the use of services complementary to counseling; these services intend to help promote lifestyle changes, financial well-being and a balanced approach to health recovery (see Complementary Services). The complementary services commonly employed with problem or pathological gamblers are Gamblers Anonymous (GA), debt/financial management, and leisure substitution. As noted previously in this report (Section 3.2.1), crisis intervention services often refer contacts to GA (57% of the interventions) and debt/financial management (33%).

It is interesting to note that the IGTP is more active in referring people to GA than GA is in referring people to the IGTP. Although we cannot determine the extent of knowledge, the identified gamblers likely had knowledge of and presumable access to GA; however, only 17% had a history of GA attendance. Less than 1% of IGTP contacts, however, said that GA referred them to the IGTP. Of this 17%, GA referred 6% to IGTP treatment. This suggests that there is a large unmet demand for treatment among GA participants.

A major goal of GA is to garner from its members a commitment to abstinence from gambling and a lifelong commitment to the principles of GA and participation in GA meetings. Given the long-standing rift between self-help and professional treatment activities, referrals to the IGTP might be perceived as inconsistent with this goal. Alternatively, it is possible that some participants of GA have their needs completely met. However, many formal treatment programs and professional therapists require, or at least encourage, troubled gamblers to be involved in GA as a component of a comprehensive treatment and aftercare plan. We encourage the IGTP to make contact with the GA community and develop improved working relationships so that the self-help community is aware of the range of services that the IGTP provides as well as the strategies that guide these treatments. Despite the anonymity of GA members, such a relationship can be nurtured and holds the potential to yield both anticipated and unanticipated benefits for everyone involved.[14.]

[14] There are potential problems that could interfere with a relationship between the IGTP and GA, however, other programs have found this relationship beneficial.

Most IGTP participants had acquired substantial gambling debts. Debt often precipitates the preoccupation with money and credit that clinicians often observe among disordered gamblers. A third of the crisis interventions included referral to financial counseling; however, information about the number of participants who actually received assistance with financial problems was not available. An amelioration of the stress and anxiety associated with financial problems can promote and extend the benefits of counseling. We encourage the IGTP to expand and carefully document the delivery of financial counseling services, as well as other types of complementary counseling services. Capturing this information for both gamblers and those affected by gambling-related losses will improve our understanding of treatment impact and efficacy and, therefore, should be a continuing goal of the IGTP.

The IGTP does not include referrals to leisure substitution counseling. Perhaps this situation reflects a paucity of information supporting this strategy for gambling treatment. However, this practice has been useful when treating other patterns of addiction (e.g., Vaillant, 1983, 1990). The Practice Guidelines included in this document identify leisure substitution as a complementary service because of its limited risk and potential benefit. It would be an interesting innovation for the IGTP to include encouragement of leisure activities that are incompatible with gambling and support further study of its benefit.

4.7 The IGTP and Relapse Prevention

Continuing care is an important service to help practice new competencies and maintain healthy lifestyle changes gained during therapy. Relapse is a continuing threat to problem gamblers as it is in other addictions. Continued care is an important component of relapse prevention. The IGTP analyses indicate that 9% of the counseling sessions were provided as continuing care (Section 3.2.2). Generally, 5% to 7% of the counseling sessions in each program were reported as continuing care. An exception was the program at Allen Memorial Hospital where 37% of all sessions were identified as continuing care. The strategies and situations that led to distribution of continuing care counseling should be investigated. For example, in addition to providing guidance about possible methods of strengthening continued care throughout the IGTP, such an analysis can provide insight into whether people who participate in continuing care are different at admission from those who eventually do not (e.g., more or less severity and extent of problems), and if concerned other involvement encourages continuing care.

4.8 The IGTP and Outcomes

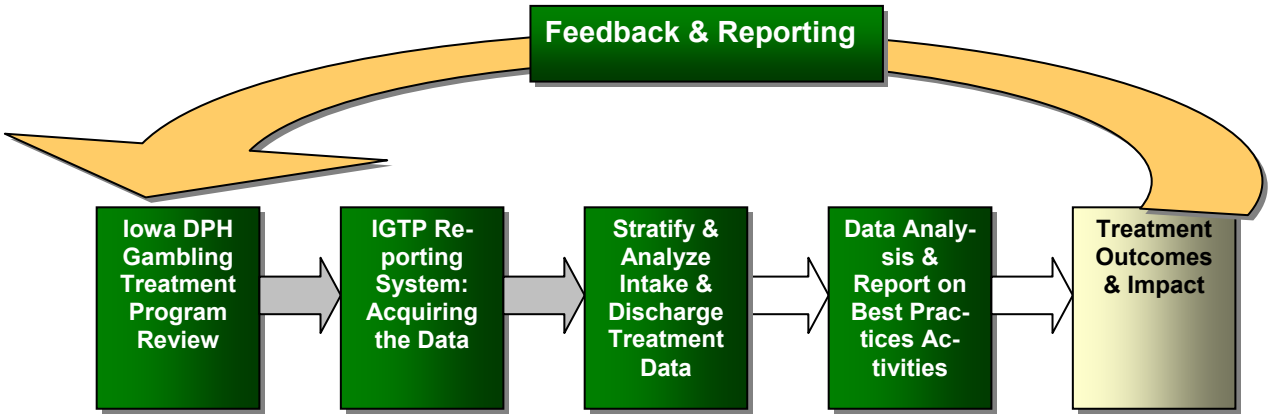
Figure 9 illustrated the path to recovery that terminates at relapse prevention. The next associated element in the process of understanding paths to recovery and in the general process of program management and evaluation is a more formal examination of treatment outcomes. The information available from the IGTP for this study included only a small number of selected participants who were followed and interviewed post treatment. As a result, our presentation of this information is necessarily cautionary. The few cases that were followed post treatment did include examples of participants who improved at follow-up even though they failed to complete all or most of their treatment program. These examples strengthen and encourage the potential value of brief interventions as discussed earlier. There are also a number of examinations of short and long-term program outcomes that would inform the continued development of the IGTP and increase its effectiveness in recapturing healthy living for Iowans with gambling related problems.

The schematic representation in Figure 10 of the evaluation of the IGTP derives from our initial research proposal. With this report we have moved the evaluation process through the first three steps. The IGTP now has the opportunity to take the next step and apply these findings by translating these observations into clinical practices that can further benefit clients seeking treatment for gambling related problems.

The development of a collated information base on a large number of IGTP participants is a major effort and accomplishment. It also demonstrates the value of gathering information from

treatment seekers in a more integrative and comprehensive manner. Taken together, this report and the establishment of a collated database represent an achievement indicating that the IGTP and we are poised to implement a formal study of treatment outcomes that will complete the first application of the entire evaluation system. As the schematic illustrates, by completing the first iteration through the evaluation loop, IGTP can modify and improve the treatment process.

Figure 10 Iowa Gambling Treatment Program Evaluation Plan



Appendix A: Gambling Treatment Reporting System

Overview

The Gambling Treatment Reporting System (GTRS) is a client-based reporting system. Data is entered on any client receiving gambling treatment services at an Iowa site. Clients living outside Iowa are coded with a distinct county code of 00 to distinguish them as non-residents. The three reporting forms in the system and their general purposes are:

Admission/Placement Screening
- Establish client record
- Define client characteristics and the problem

Services
- Report monthly services

Discharge/Follow-Up
- Define post-service client characteristics
- Evaluate program performance
- Inactivate admitted client record

The following discussion illustrates the way the reporting records are used in the GTRS system:

Remember, **data must be entered as the sequence of events occurred. (i.e. Crisis contact, then crisis services, screening form, then screening services, etc.)**

Crisis/Screening/Admission
Used to report Crisis Contact
- Creates a client record for a Crisis contact

Used to report Placement Screening
- Creates a client record for Placement Screening

Used to report an Admission
- Creates a client record for Admission

Services
Used to report Services provided
- Submit one Service form for the entire month *per client, per form usage*

Discharge/Follow-up
Used to report a Discharge
- Only admitted clients may be discharged

Used to report a Follow-up
- Only discharged clients may be followed-up

How GTRS Works

The data must be entered in the sequence the activity occurred.

Error Checks: Data records are checked to ensure the item limits are not exceeded. Edit checks are built into the GTRS to eliminate most errors. These edits are intended to assist you; however, your agency is responsible for collecting and entering accurate data.

If you encounter difficulty please check your manual first. If at that point you are still unable proceed, please contact Mary Crawford for technical assistance at 515/281-8479.

The Reporting Cycle

1. Report Month

   Data must reflect all treatment provided on and before the last day of the reporting month.

2. Due Date

   Data is due in the Iowa Department of Public Health, Iowa Gambling Treatment Program office on the eighth working day of the month. Data not received by the due date is considered late and will be processed with the next reporting month's data.

Admission/Placement Screening Form

Purposes

1. Report a Crisis contact for a gambler or concerned person.
2. Report a Placement Screening for a gambler or concerned person.
3. Report the Admission of a gambler or a concerned person to treatment.
4. Define basic client characteristic data.
5. Update or correct previously reported client data.

Limits

For each Crisis contact, Placement Screening contact, and Admission you must also report the Services provided.

If a client is not admitted and comes in for *treatment*, this constitutes an admission (you must complete an Admission record). If the client is admitted and expected to be seen again within 30 days, the client remains admitted; otherwise, the client is discharged.

1. For Form Usage 10 or 11--Crisis Gambler or Crisis Concerned, submit only one record even if the client contact occurs several times during the month.

2. For Form Usage 20 or 30--Placement Screening Gambler or Placement Screening Concerned, a new placement screening can be entered if a one-month break in service has occurred.

3. Only one Admission record (form usage 60 or 70) may exist at one time on a client.

4. When *re-admitting* a client, the Admission form must be dated after the previous discharge date.

5. Primary Source of Payment (item number 27), code 99 is allowed on form usage 10 or 11 only.

6. Social Security Number is a required field. If Social Security Number is unknown use, 000-00-Xnnn, whereas nnn is a 3 digit sequential number assigned by the program. (Last four digits of the SSN must match the last four digits of the client number).

Requirements

1. For (10) Crisis Gambler, items 1 through 12a must be completed (the remaining items are optional).

2. For (11) Crisis Concerned, items 1 through 12a must be completed (12c through 54, 62 through 64j are optional).

3. For (20) Placement Screening Gambler complete all items.

4. For (30) Placement Screening Concerned, complete items 1 through 54, and 62 through 64j.

5. For (60) Admit Gambler, complete all items except item number 36.

6. For (70) Admit Concerned, complete items 1 through 30, 50 through 54, and 62 through 64j.

Corrections and Updates

Please refer to page 6 of this manual for instructions and limits.

Services Form

Purposes

1. Used to report crisis, screening, admission, and follow-up services.
2. Update or correct previously reported client data.

Limits

1. For Form Usage 16 or 17--Crisis Gambler or Crisis Concerned, the only allowed services are Crisis Intervention which are either crisis calls or crisis contact visits before the client is in an admission status.

2. For Form Usage 26 or 36--Placement Screening Gambler or Placement Screening Concerned, if a one-month break in service has occurred, another admission/placement screening must be submitted before additional placement screening services will be accepted.

3. For Form Usage 26 and 36, the only allowed services are Intake, Assessment, Evaluation.

4. For Form Usage 66 or 76--Admit Gambler or Admit Concerned, the only allowed services are Individual, Group, Family, and Continuing Care Counseling.

5. For Form Usage 96--Follow-up Interview, the only service allowed is Follow-up Interview. *(Follow-up service is allowed only if the interview is completed.)*

6. For Item 27a--Funding Source, is required on all Service records. Code 0 for Non-billable, 1 for State Unit Reimbursement, and 2 for State Non-Unit Reimbursement.

7. For all Form Usages 16, 17, 26, 36, 66, 76, and 96, items 1, 2, 3, 4, 5, 27a, 37, and 70 are required.

Requirements

1. For **Form Usage 16 and 17**, complete items 1 through 7, 27a., 37, and 70.
   Item number 37--Client Services. Report the total number of Crisis Intervention minutes and the total number of sessions provided for Crisis during the month.
   Crisis Intervention includes crisis calls or crisis contact visits from clients who have not had a placement screening or been admitted. If the client is in admission status, report crisis time as individual counseling.
   Item Number 70--Other Services. Report either 1 (yes) or 2 (no) for each service.

2. For **Form Usage 26 and 36**, complete items 1 through 7, 27a., 37, and 70.
   Item Number 37--Client Services. Report the total number of Placement Screening, Intake, Assessment, and Evaluation minutes and the total number of sessions for the Placement Screening process.
   Item Number 70--Other Services. Report either 1 (yes) or 2 (no) for each service.

3. For **Form Usage 66 and 76**, complete items 1 through 7, 27a., 37, and 70.
   Item Number 37--Client Services. Report the total minutes and total sessions of Individual Counseling, Group Counseling, Family Counseling, or Continuing Care Services provided during the month.
   Item Number 70--Other Services. Report either 1 (yes) or 2 (no) for each service.

4. For **Form Usage 96**, complete items 1 through 7, 27a, 37, and 70.
   Item Number 37--Client Services. Report the total number of Follow-up minutes and sessions for the reporting month. You may report follow-up services only if you have completed a follow-up in-

terview. Follow-up minutes will not be allowed if you have attempted but not completed a follow-up interview.
Item Number 70--Other Services. Report either 1 (yes) or 2 (no) for each service.

Corrections and Updates

Please refer to page 6 of this manual for instructions and limits.

Discharge/Follow-up Form

Purposes

1. Discharge a gambler or a concerned person.
2. Define post-service client characteristic data.
3. Six month follow-up of clients completing treatment and not readmitted during those six months.
4. Update or correct previously reported client data.

Limits

1. Only one Discharge record may be on file for each admission record.
2. Only one Follow-up record may be on file for each discharge record.
3. A Follow-up will not be accepted on a discharged client re-admitted to treatment.

Requirements

1. Discharge Gambler: FORM USAGE 80
   If the reason for discharge is 21, 22, 23, 24, 28, complete items 1 through 42e and 50 through 64j.
   If the reason for discharge is 25, 26 or 27, complete items 1-11, 30 and 36.

   Discharge Concerned Person: FORM USAGE 81
   If the reason for discharge is 21, 22, 23, 24, 28, complete items 1 through 30, 42a-e, 50 through 54, and 63 through 64j. *Do not completed item 36—you are already reporting on the Concerned person.*
   If the reason for discharge is 25, 26 or 27, complete items 1-11, 30.

2. Follow-Up Gambler: FORM USAGE 90
   "Interview Not Completed," complete items 1 through 5 and item 43.
   "Interview Completed," complete all items. (Exception*: If Item 46 is answered as no, leave items 48a-b blank.)*

   Follow-Up Concerned Person: FORM USAGE 91
   "Interview Not Completed," complete items 1 through 5 and item 43.
   "Interview Completed," complete items 1 through 54, and 63 through 64j. (Exception*: If Item 46 is answered as no, leave items 48a-b blank.)*

   Follow-up records will be required for Admit Gambler Clients (Form Usage 60) when Item 30 Reason for Discharge was 21 or 22 (Completed Treatment) no sooner than six (6) months from the DATE OF DISCHARGE unless the client has been readmitted to your program as a gambler (FORM USAGE 20 or 60). Completion of a follow-up on other reasons for discharge are optional. Follow-ups will be at six (6) months.

   A discharged client completing treatment and receiving a crisis contact after the date of discharge will still be required to submit a Follow-up for the "Gambler Discharge." If client is screened or readmitted (form usage 20 or 60) as a gambler within six months of the discharge, the Follow-up will not be accepted.

   If the client is readmitted after seven months and the required Follow-up is not on the system, the Admission record will not be accepted.

Corrections and Updates

Please refer to page 6 of this manual for instructions and limits.

Making Corrections

Responsibility-Computer Submission

Corrections can only be made on current records (those not 'archived'). **Please note: Program Number, Client Number, Date of Activity, and Form Usage are key items on the records. You cannot change the data in these fields.** Changing the data in these fields can cause major problems in the database at your facility and the State's database. If you have a question on an error in any of these fields, contact Linda Holt for technical assistance at 515/281-4643.

Updates and changes to records must be made by your office and submitted on paper to the State for data entry. To submit a correction record, in item number six, you must report the invoice number of the form you intend to correct. Complete the client name, phone number, city, state, zip, counselor name and form completion date on the top of the form and Items 1 through 6. On the remainder of the form, complete only the item number you are changing.

For Service records—if you are adding or subtracting time or sessions, write the total for the month not just the additional or the amount you wish to subtract.

New This Year

Crisis/Placement Screening/Admission Forms

In anticipation of the computerized program, several items will be required to be completed. Name, address, state, zip code, and phone number must be completed unless the **crisis** contact refuses to give the information.

The counselor name and form completion date will be required.

The Social Security Number is required. For Crisis only—If you are unable to obtain the client's Social Security Number, you must report the SSN as 000-00-Xnnn whereas nnn is the 3-digit number you assign.

The last 4 digits of the SSN must also be the last four digits of the client number.

Service and Discharge/Follow-up Forms

Continue to report the client name, form completion date, and counselor name on Service and Discharge/Follow-up forms.

Two new form usages have been added to the Discharge/Follow-up form. Please see the manual and forms for these new form usages.

Item Codes and Definitions

1. **Program:** *(Crisis/Placement Screening/Admission, Service, Discharge/Follow-up)*
   Program numbers are assigned for each program and cannot be changed.

2. **Client Number** *(Crisis/Placement Screening/Admission, Service, Discharge/Follow-up)*
   YRMODAY- The year, month, and day of birth
   (Exception for **Crisis clients only: ONLY** if the birth date is unknown, then use the date of contact.)

   SSN - The last four digits of the client's social security number.
   If the SSN is unknown, use Xnnn, whereas nnn is a 3 digit number assigned by your facility, i.e. X001.

Once a client number is assigned, the number cannot be changed.

3. **Primary Facility** *(Crisis/Placement Screening/Admission, Service, Discharge/Follow-up)*
3 numeric characters.
The Primary Facility is that site where the client spends the majority of time in treatment. Programs may assign facility numbers to each site office and treatment facility. **000 is not an allowable facility code.**
A list of corresponding facility numbers must be provided to the Iowa Gambling Treatment Program.
Note: Do not use alpha characters. We reserve the right to use alpha characters for special notations.

4. **Date of Activity** *(Crisis/Placement Screening/Admission, Service, Discharge/Follow-up)*
Give the month (2 digits), day (2 digits), and year (4 digits) of the activity.

Date of Activity *(Service)*
Give the month (2 digits), and year (4 digits) of the service activity.

5. **Form Usage** *(Crisis/Placement Screening/Admission, Service, & Discharge/Follow-up)*
[REFER TO PAGES 3, 4, AND 5 FOR LIMITS AND REQUIREMENTS]

10 Crisis Gambler
11 Crisis Concerned Person
16 Crisis Gambler
17 Crisis Concerned Person
20 Placement Screening Gambler
26 Placement Screening Gambler
30 Placement Screening Concerned Person
36 Placement Screening Concerned Person
60 Admit Gambler
66 Admit Gambler
70 Admit Concerned Person
76 Admit Concerned Person
80 Discharge Gambler
81 Discharge Concerned Person
90 Follow-up Gambler
91 Follow-up Concerned Person
96 Follow-up Service Concerned Person and Gambler

6. **Original Invoice Number** **(FOR CORRECTION OF PREVIOUSLY SUBMITTED and DATA-ENTERED FORMS)**
To correct data on a form previously submitted AND data entered, record the invoice number of the original record and correct the item that was in error. For Service records—if you are adding or subtracting time or sessions, write the total for the month not just the additional or the amount you wish to subtract.

7. **Invoice Number** *(Crisis/Placement Screening/Admission, Service, & Discharge/Follow-up)*
Preprinted on the forms.
Do not use a photo copy of the form, use original only.

8. **Waiting Time (in days) for Crisis/Placement Screening/Admission** *(Crisis/Placement Screening/Admission)*
000 = No waiting time for Crisis/Placement Screening/Admission
Report *000 if the client declined to be seen or admitted immediately.*
Placement Screening = Days between first call and date of Placement Screening.
Admit Gambler/Admit Concerned = Days from last screening to date of Admission.
If a program is closed for a day, that day is not counted as waiting time.

9. **Birth date** *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Use client's birthday. Give the month (2 digits), day (2 digits), and year (4 digits) of birth.
(Exception for **Crisis clients only**: **ONLY** if the birth date is unknown, then use the date of contact.)

9a. **Age on the Date of Activity** (Crisis/Placement Screening/Admission)
00=Unknown
01-99

00 is allowed on a crisis form only.

11. County *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
List the county number of county where the client resides. See Appendix A for a detailed list of county numbers or refer to the back of Admission/Placement Screening or Discharge/Follow-up forms.
Crisis Contact—County of residence at the time of the Crisis Contact.
Placement Screeing/Admission--County of Residence **PRIOR** to the Placement Screening or Admission.
NOTE: 00-Out of State is for a client living outside Iowa who is provided services at a program site in Iowa.

12a. Gender *(Crisis/Placement Screening/Admission)*
1 Male 2 Female

12c. Number of Children *(Crisis/Placement Screening/Admission)*
Record the number of children in the household and/or children for which the client is financially responsible.

13b. Relationship Status *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
1 Single .....Never married. Persons whose only marriage has been annulled are classified as single.
2 Married .....Living with spouse.
3 Cohabiting .....Living as married with any other individual.
4 Separated.....Legally or otherwise absent from their spouse because of marital discord.
5 Divorced
6 Widowed
7 Other

14a. Ethnicity *(Crisis/Placement Screening/Admission)*
0 Not Hispanic or Latino 3 Cuban
1 Puerto Rican 5 Other Hispanic or Latino
2 Mexican

14b. Race *(Crisis/Placement Screening/Admission)*
Record the race the client considers themselves to be. Hispanic is not a RACE, it is an ethnic origin. If the client is of Hispanic or Latino origin, they must also select a race.
Note: Select up to 3 RACE categories, *but at least 1*.
1. Caucasian/White: A Caucasian person having origins in any of the people of Europe (including Portugal), North Africa, or the Middle East.
2. African American/Black: A person having origins in any of the Black racial groups of Africa.
3. American Indian: A person having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition (other than Alaskan Native).
4. Asian: A person having origins in any of the original people of the Far East, Indian subcontinent, or Southeast Asia.
5. Hawaiian or Pacific Islander: A person having Hawaiian origins or of the Pacific Islands.
6. Alaskan Native: A person having origins in any of the original people of Alaska (Aleut, Eskimo, Indian).

15. Highest Grade Completed *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Highest school grade;
high school graduate or GED = 12
Nine months of technical/vocational training = 1 grade;
College = 13-16;
One year of graduate school = 17;
Graduate degree (Master's) = 18;
Post graduate work = 19;
Ph.D. or other doctorate degree = 20

16. Employment Status *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
01 Employed Full Time: 35 or more hours a week. Includes armed forces.
02 Employed Part Time: Less than 35 hours a week.

03 Unemployed :Looking for work in past 30 days
04 Not in labor force ..... homemaker, student, retired, person with disability, inmate, not looking for work in past 30 days.

16a. Not In Labor Force Due To: *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
00 Not Applicable ..... Client is employed or looking for work in the last 30 days.
01 Homemaker No paid employment, primary home caretaker.
02 Student Client is a full time student
03 Retired Left last job because of age.
04 Person has a Disability ..... Unable to work because of disability.
05 Incarcerated..... Confined to jail or prison which restricts the client from
..... securing employment.
06 Unemployed (Not looking for work in past 30 days) ..... Client is employable, but not employed or looking for work.

17. Occupation *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
(Refer to Appendix B for a detailed listing of occupations)
0 None.....Retired, disabled, or student (not in the labor force)
1 Prof/ Managerial.....Working in a professional or managerial position.
2 Sales/ Clerical .....Working in sales or in a clerical position.
3 Crafts/ Operatives .....Working at a craft or operating machinery.
4 Laborer.....Working as a laborer.
5 Farm Owner/ Laborer.....Owning a farm or working as a farm laborer.
6 Service/ Household .....Working in a service industry or household position.

19. Months Employed During The Last 6 Months *(Crisis/Placement Screening/Admission)*
0 = None 1-6 = One to Six 8 = Not in the labor force for last 6 months

Months Employed Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
00 = None 01-96 = One to 96 months
97 = 97 or more months 98 = Not in the labor force since Admission to/ Discharge from Treatment

20. Days Of Work Or School Missed In The Last 6 Months Due To Gambling-Related Problem *(Crisis/Placement Screening/Admission)*
00 = None 01-96 = One to 96 days
97 = 97 or more days 98 = Not in the labor force for last 6 months

Days Of Work Or School Missed Due To Gambling-Related Problem Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
Do not count days of school or work missed due to the treatment experience.
00 = None 01-96 = One to 96 days
97 = 97 or more days 98 = Not in the labor force since Admission to/Discharge from treatment

20a. Jobs Lost In The Last 5 Years Due To A Gambling-Related Problem *(Crisis/Placement Screening/Admission)*
00 = None 01-29 = One to 29+ 98 = Not in the labor force for the last 5 years

Jobs Lost Due To Gambling-Related Problem Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
00 = None 01-29 = One to 29+ 98 = Not in the labor force since Admission to/Discharge from treatment

21. Current Gross/Taxable Individual Monthly Income *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Record income at the time of the event. If the client has no taxable income, use 00000 (i.e. for an unemployed person—unemployment benefits are taxable and reportable). For an adolescent, use that client's income not

parents' income. (If after all possible attempts have failed to even estimate the individual's income, then use 99998, Not applicable.)

00000 = None 00001-99996 = $1 to $99,996
99997 = $99,997 or more 99998 = Not applicable

21a. Total Household Monthly Income *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Record income at the time of the event. (If after all possible attempts have failed to even estimate household monthly income, then use 99998, not applicable.)
00000 = None 00001-99996 = $1 to $99,996
99997 = $99,997 or more 99998 = Not applicable

Total Household Monthly Income cannot be less than the Individual Monthly Income.

22. Military Status *(Crisis/Placement Screening/Admission)*
0 None ..... Never been in military, or dishonorable discharge
1 Veteran ..... Honorably discharged
2 In Reserves ..... National Guard, etc.
3 Active Duty ..... Currently in the military
4 Combat Veteran ..... Combat experience

23. Health Insurance (*Crisis/Placement Screening/Admission*)
(*Medicare or Medicaid is not considered health insurance*. If Medicare or Medicaid has a supplemental insurance policy, the answer to this question would be yes, due only to the supplemental policy.
1 Yes 2 No

23a. If Yes, Does Insurance Cover Gambling Treatment? *(Crisis/Placement Screening/Admission)*
(Even if the client has used up all the benefits under gambling treatment, the answer would be yes.)
1 Yes 2 No

25. Times Arrested in the Last 12 Months *(Crisis/Placement Screening/Admission)*
(TOTAL times arrested in last 12 months)
00 = None 01-96 = One to 96 arrests 97 = 97 or more arrests of any kind

Times Arrested Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
(TOTAL times arrested)
00 = None 01-96 = One to 96 arrests 97 = 97 or more arrests of any kind

(25f plus 25g must equal 25e All Prior Arrests.)

25e. All Prior Arrests *(Crisis/Placement Screening/Admission)*
25e cannot be less than item 25 because it must include times arrested in the last 12 months
00 = None 01-96 = One to 96 arrests 97 = 97 or more arrests of any kind

25f. All Prior Arrests Gambling-related *(Crisis/Placement Screening/Admission)*
Of all prior arrests in 25e, record the number of gambling-related arrests. Some types of gambling-related arrests include violence, theft, forgery, embezzlement, bad checks, illegal gambling, etc.
00 = None 01-96 = One to 96 arrests 97 = 97 or more gambling-related arrests

Number Of Arrests Gambling-related Since Admission To/Discharge From Treatment *(Discharge/Follow-up*) Record the number of gambling-related arrests.
00 = None 01-96 = One to 96 arrests 97 = 97 or more arrests of any kind

25g. All Prior Arrests Not Gambling-related *(Crisis/Placement Screening/Admission)*
Of all prior arrests in 25e, record the number of arrests not gambling-related.
00 = None 01-96 = One to 96 arrests 97 = 97 or more arrests not gambling-related

(25f plus 25g must equal 25e All Prior Arrests.)

Number Of Arrests Not Gambling-related Since Admission To/Discharge From Treatment
(Discharge/Follow-up) Record the number of arrests not gambling-related.
00 = None 01-96 = One to 96 arrests 97 = 97 or more arrests of any kind
(25f plus 25g must equal 25 Times Arrested since Admission/Discharge)

25h. Have You Ever Been Incarcerated? *(Crisis/Placement Screening/Admission*)
1 Yes 2 No

26a. Number Of Gamblers Anonymous/ Gamanon Or Similar Meetings Per Month *(Crisis/Placement Screening/Admission)* Record the number of meetings attended during the month prior to admission.
00 = None 01-28 = 1 to 28 meetings 29 = 29 or more meetings

(26a) **Number Of Gamblers Anonymous/ Gamanon Or Similar Meetings Per Month Since Admission to/Discharge from Treatment** *(Discharge/Follow-up)*
Record the number of meetings attended per month since admission/ discharge.
00 = None 01-28 = 1 to 28 meetings 29 = 29 or more meetings

27. Primary Source Of Payment *(Crisis/Placement Screening/Admission)*
Codes are listed on back of the form.
(The source that is paying the majority of the client's treatment episode, i.e. if insurance will be paying for the major portion of the client's treatment, report health insurance.)

00 No Charge.....Client does not pay for treatment (do not use this code if .....someone else pays for treatment other than the client)
11 Self-Pay.....Client pays for treatment
12 Blue Cross or Blue Shield (BC/BS).....Payment primarily covered by BC/BS
13 Health Maintenance Organization (HMO)...Payment covered by an HMO insurance
14 Other Health Insurance.....Payment covered by another insurance
15 Medicaid Eligible .....Payment covered by Medicaid
16 Medicare Eligible.....Payment covered by Medicare
17 Workers Compensation.....Client is covered by Workers Compensation
18 Other Government .....Other Government payment such CHAMPUS, VA contract, OWI, TASC, and Other State agencies, except IDPH
21 Private Pay.....Other Private Pay
22 State Non-Unit Reimbursement.....IDPH Reimbursed - Line Item Reimbursement
23 Medicare/Medicaid Eligible .....Payment covered by both Medicare and Medicaid
24 Medicare/Non-Medicaid Eligible .....Payment covered by both Medicare and IDPH contract
25 State Unit Reimbursement.....Payment covered by IDPH contract
99 Unknown .....Payment covered by unknown source

27a. Funding Source *(Service)*

0 Non-Billable (client services which are not eligible for billing to IDPH, i.e., client pays 100% of treatment, services for non-Iowa residence, insurance pays all)

1 State Unit Reimbursement (this month's service if all or part is paid by IDPH—see 0-Non-billable for exceptions)

2 State Non-Unit Reimbursement (cost of services are paid by IDPH but not on a unit of service basis, i.e. special projects paid on a line item reimbursement basis)

30. **Source of Referral** *(Crisis/Placement Screening/Admission)*
Record who originally referred the client to treatment. Codes are listed on back of the form.

21 Self Referral
22 Health Care Provider Includes a physician or other licensed health care professional, general hospitals, and nursing homes.
23 Community Mental Health Clinic Includes a psychiatrist, psychiatric hospitals, and mental health programs.
24 Alcohol/Drug Abuse Provider ..... Any program/clinic or other health care provider whose principal objective is the treatment of clients who have substance abuse problems, or a program whose activities are related to prevention, education, and/or treatment of alcoholism or drug abuse.
25 Other Individual ..... Includes family or friend, or any other person.
26 Employer/EAP ..... This includes a supervisor, an employee counselor, or an employee assistance program (EAP).
27 School..... A school principal, counselor, teacher, or student assistance program; the school system or education agency.
30 Other Criminal Justice/Court ..... Includes referrals from a judge, prosecutor, probation officer, or other personnel affiliated with a Federal, State, and/or county judicial system and referrals from police. This also includes clients who have been referred in lieu of or for deferred prosecution, and pretrial release, before or after official adjudication. Additionally, it includes clients on pre-parole, pre-release, work and/or home furlough. The client need not be officially designated as "on parole."
38 Other Community ..... Includes a Federal, State, or local agency that provides aid in the areas of poverty relief, unemployment, shelter, or social welfare. Community and religious organizations are included in this category.
39 Spouse ..... Includes a spouse and living as married with another person.
44 Debt Counselor..... Includes financial professionals referring due to losses and debt.
46 GA/ Gamanon..... Gamblers Anonymous/Gam-anon members referring clients.
48 Helpline..... Gambling Treatment Helpline referring client to the program.

30. **Reason For Discharge** *(Discharge)*
21 Completed Treatment, treatment plan completed
22 Completed Treatment, treatment plan substantially completed
23 Referred to outside agency
24 Program Decision to discharge the client due to lack of treatment progress and/or noncompliance with treatment plan
25 Client Left before completing treatment
26 Incarcerated
27 Death of Client
28 Other

36. **Based on this assessment, is client being recommended for treatment?** (*Crisis/Placement Screening/Admission)*
For form usage 20 or 30 (Placement Screening) only.
1 Yes 2 No

36. **Was A Concerned Person Also Involved In The Treatment Process?** *(Discharge*)
Did the gambler client have a significant other or a concerned person who was involved in the treatment process. COMPLETE FOR GAMBLER ONLY
1 Yes 2 No

37. Client Services *(Services)*
Enter the total minutes and total sessions of those services provided for the client during the report month.

Crisis Intervention	form usage 16 or 17 only
Plmt/Srng--Intake, Assmt, Eval	form usage 26 or 36 only
Individual Counseling	form usage 66 or 76 only
Group Counseling	form usage 66 or 76 only
Family Counseling	form usage 66 or 76 only
Continuing Care Individual	form usage 66 or 76 only
Continuing Care Group	form usage 66 or 76 only
Follow-up Interview	form usage 96 only--services not allowed if the interview was not completed.

42. IN CLIENT'S OPINION, How Beneficial Was The Program's: *(Discharge/Follow-up)*

(42e cannot be coded 0)

Answers
0 Did Not Receive
1 Very Beneficial
2 Beneficial
3 Not Beneficial
9 Don't Know

42a Individual Counseling
42b Family Counseling
42c Group Counseling
42d Education Classes
42e Overall Program Rating *(cannot be coded 0)*

43. Follow-up Interview Was Not Completed *(Follow-up)*
30 Not Applicable, Interview was Completed
31 Unable to Locate Client
32 Client Located, but Refused to be Interviewed
33 Other Household Member Refused Access to the Client
34 Client Incarcerated
38 Other

44. Follow-up Interview Completed With: *(Follow-up)*
11 Client
12 Significant Other
13 Other Household Member
18 Other

45. Follow-up Type Of Interview *(Follow-up)*
5 Telephone
6 In Person
7 Letter or Survey
8 Other

46. Has the client been admitted to a gambling treatment program other than your own since discharge from your program? *(Follow-up)*
1 Yes *(Items 48a-b cannot be coded as Not Applicable)*
2 No *(Items 48a-b must be coded as Not Applicable)*

48a. Number Of Gambling Treatment Program Admissions Since Discharge From Your Program *(Follow-up)*
0 ..... Less than one month
1-7 ..... One to seven or more
8 ..... Not admitted

48b. If client was admitted to a different gambling program report the months since that discharge. *(Follow-up)*
00 ..... Less than one month
01 - 25 ..... One to 25 or more month
98 ..... Not admitted

50. Bankruptcy Or Other Defaults *(Crisis/Placement Screening/Admission)*
1 Yes
2 No

50. Bankruptcy Or Other Defaults Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
1 Yes
2 No

51. Total Amount Of Credit Card Debt *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

52. Total Amount Required To Pay All Overdue Bills *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Overdue bills may include, but are not limited to, such items as a first mortgage, second mortgage, home improvement loan, car loan, business loan, personal loan from family and friends, life insurance loan, credit card bills, back taxes, any overdue amount owed to bookies, and other bills.
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

53. Total Debt *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Total debt may include, but is not limited to, such items as a first mortgage, second mortgage, home improvement loan, car loan, business loan, personal loan from family and friends, life insurance loan, credit card debt, back taxes (federal, state, and sales), debt owed to bookies, and any other debt.
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

54. How Much Of Total Debt Is A Result Of Gambling *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

55a-l. Kinds Of Wagering In The Last Six Months *(Crisis/Placement Screening/Admission)*
Record the percent of wagering for each item If none, you must record 000.
The total of all the percentages given must equal 100%.
000 - 100

55a-l. Kinds Of Wagering Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
Record the percent of wagering for each item If none, you must record 000.
The total of all the percentages given must equal 100%.
000 - 100

55a. Casino table games
55b. Slots
55c. Live Keno
55d. Video: Poker/Keno/Blackjack
55e. Non-Casino cards
55f. Bingo
55g. Scratch tickets & Pull-tabs
55h. Lotteries (includes numbers)
55i. Racetrack (horses, dogs)
55j. Sports
55k. Stocks/Commodities/Futures
55l. Other

56. Total Amount Lost Weekly *(Crisis/Placement Screening/Admission)*
Record the average amount lost weekly over the last six months.
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

56. Total Amount Lost Weekly Since Admission to/Discharge from Treatment *(Discharge/Follow-up)*
Record the average amount lost weekly since admission to/ discharge from treatment.
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

Note: The percentages for 56a and 56b must equal 100% unless Total Amount Lost is zero.

56a. Percent Lost Legally *(Crisis/Placement Screening/Admission)*
Of the average amount lost weekly, give the percentage lost legally.
000 - 100

56b. Percent Lost Illegally (*Crisis/Placement Screening/Admission)*
Of the average amount lost weekly, give the percentage lost illegally.
000 - 100

57. Frequency Of All Types Of Wagering In The Last 30 Days *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Code each using one of the codes listed; codes are listed on the back of the form.

10	None	14	Daily
11	1-3 Times in Past Month	15	2-3 Times per Day
12	1-2 Times per Week	16	4+ Times Daily
13	3-6 Times per Week		

58. Most Lost In Any One Week In The Last 6 Months *(Crisis/Placement Screening/Admission)*
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

58. Most Lost In Any One Week Since Admission To/Discharge From Treatment *(Discharge/Follow-up)*
000000 = None 000001-999996 = $1 to $999,996
999997 = $999,997 or more 999998 = Not applicable

59. Date Last Gambled *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*
Give the month (2 digits), day (2 digits), and year (4 digits) of the date last gambled.

60a. Gambler's Age When First Gambled *(Crisis/Placement Screening/Admission)*
00 = Client has never gambled 01-98 = One to 98 years 99 = 99 years or greater

60b. With Whom Did The Gambler First Gamble? *(Admission/Placement Screening)*

1 Parent	5 Friend
2 Sibling	6 Other
3 Relative	7 Self
4 Family Group	8 Business Group

60c. Was Gambling An Accepted Activity Growing Up In The Gambler's Family? *(Crisis/Placement Screening/Admission)*
1 Yes 2 No 0 Neutral

61. Gambler's Age When Gambling Became A Problem *(Crisis/Placement Screening/Admission)*
00 = Client denies any problem 01-98 = One to 98 years 99 = 99 years or greater

62. Prior Help Sought For Gambling Problem *(Crisis/Placement Screening/Admission)*
1 Yes 2 No

63. Have You Ever Been Treated For A Drinking/ Drug Problem? *(Crisis/Placement Screening/Admission)*
1 Yes 2 No

63. Have You Ever Been Treated For A Drinking/ Drug Problem Since Admission To/ Discharge From Gambling Treatment? *(Discharge/Follow-up)*
1 Yes 2 No

63a. Last Treatment Date For A Drinking/ Drug Problem (*Crisis/Placement Screening/Admission)*
Give the month (2 digits), day (2 digits), and year (4 digits) of the date last treated.

Note: If 63 is yes, you must report a date in 63a.
If 63 is 2 (no), then report zero in 63a.

64a-j. <u>Frequency Of Types Of Behavior In The Last 30 Days</u> *(Crisis/Placement Screening/Admission, Discharge/Follow-up)*

Code each using one of the codes listed; codes are also listed on the back of the form.

10	None	14	Daily
11	1-3 Times in Past Month	15	2-3 Times per Day
12	1-2 Times per Week	16	4+ Times Daily
13	3-6 Times per Week		

64a. Tobacco Use
64b. Alcohol Use
64c. Illicit ("street") drug use
64d. Prescription drug abuse
64e. Food Abuse (self-starvation, binge, purge)
64f. Compulsive work (uses work to avoid/escape)
64g. Compulsive sex/romance/relationship
64h. Compulsive spending/shopping
64i. Physical Violence
64j. Physical harm to self

70. <u>Other Services Provided Or Recommended/Non-Billable To The Iowa Gambling Treatment Program</u> (Services)

1 Yes 2 No

COUNTY CODES

Counties

00 Does not live in Iowa
01 Adair
02 Adams
03 Allamakee
04 Appanoose
05 Audubon
06 Benton
07 Black Hawk
08 Boone
09 Bremer
10 Buchanan
11 Buena Vista
12 Butler
13 Calhoun
14 Carroll
15 Cass
16 Cedar
17 Cerro Gordo
18 Cherokee
19 Chickasaw
20 Clarke
21 Clay
22 Clayton
23 Clinton
24 Crawford
25 Dallas
26 Davis
27 Decatur
28 Delaware
29 Des Moines
30 Dickinson
31 Dubuque
32 Emmet
33 Fayette
34 Floyd
35 Franklin
36 Fremont
37 Greene
38 Grundy
39 Guthrie
40 Hamilton
41 Hancock
42 Hardin
43 Harrison
44 Henry
45 Howard
46 Humboldt
47 Ida
48 Iowa
49 Jackson
50 Jasper
51 Jefferson
52 Johnson
53 Jones
54 Keokuk
55 Kossuth
56 Lee
57 Linn
58 Louisa
59 Lucas
60 Lyon
61 Madison
62 Mahaska
63 Marion
64 Marshall
65 Mills
66 Mitchell
67 Monona
68 Monroe
69 Montgomery
70 Muscatine
71 O'Brien
72 Osceola
73 Page
74 Palo Alto
75 Plymouth
76 Pocahontas
77 Polk
78 Pottawattamie
79 Poweshiek
80 Ringgold
81 Sac
82 Scott
83 Shelby
84 Sioux
85 Story
86 Tama
87 Taylor
88 Union
89 Van Buren
90 Wapello
91 Warren
92 Washington
93 Wayne
94 Webster
95 Winnebago
96 Winneshiek
97 Woodbury
98 Worth
99 Wright

OCCUPATION CODES
(For Item 17. Occupation)

1. Professional, Technical, Administrative, & Managerial

Accountants
Architects
Assessors, Controllers, etc.
Bank Officers, Financial Managers
Buyers & Shippers
Credit Men
Computer Specialists
Engineers & Engineering Technicians
Farm Management Advisors
Foresters & Conservationists
Funeral Directors
Health Administrators
Home Management Advisors
Judges, Lawyers
Inspectors, Public Administrators
Local Public Administration
Librarians, Archivists
Mathematicians, Statisticians
Life & Physical Scientists
Operations Researchers & Analysts
Office Managers
Officers, Pilots & Pursers (Ship)
Officials & Administrators
Officials of Lodges & Unions
Personnel & Labor Relations
Physicians, Dentists, etc.
Postmasters & Superintendents
Railroad Conductors
Nurses, Dietitians, Therapists
Health Technologists & Technicians
Religious Workers, Clergy
Restaurant & Bar Managers
Sales Managers & Dept. Heads
School Administrators, Teachers
Social Scientists
Social & Recreation Workers
Vocational Counselors
Writers, Artists, Entertainers
Technicians
(air pilots, traffic controllers, flight engineers, etc.)

2. Sales, Clerical, & Kindred Workers

Advertising Agents & Sales
Auctioneers, Demonstrators
Bank Tellers, Billing Clerks
Bookkeepers, Cashiers
Clerical Assistants
Clerical Supervisors
Collectors, Bill & Account
Counter Clerks (except food)
Dispatchers & Starters
Enumerators & Interviewers
Estimators & Investigators
Expediters & Production Controllers
File Clerks & Office Messengers
Hucksters & Peddlers
Insurance Agents, Brokers, etc
Insurance Adjusters & Examiners
Library Attendants
Mail Carriers, Postal Clerks
Newspaper Carriers
Office Machine Operators
Payroll & Timekeeping Clerks
Proofreaders
Real Estate Agents & Brokers
Real Estate Appraisers
Receptionists & Secretaries
Sales Representatives
Salesmen & Sales Clerks
Shipping & Receiving Clerks
Stenographers, Typists
Stock & Bond Salesmen
Stock Clerks & Storekeepers
Teacher Aides
Telegraph Operators & Messengers
Telephone Operators
Ticket, Station & Express Agents
Weighers

(Occupation codes continued)

3. Crafts, Operatives, & Transport Equipment Operators

Asbestos & Insulation Workers
Automobile Installers
Blasters & Powdermen
Boatmen & Canal Men
Brick Masons & Stonemasons
Bulldozer Operators
Carpet Installers
Chairmen, Road Men, Surveying
Clothing Ironers & Pressers
Crane Men, Derrick Men, Hoister
Decorators & Window Dressers
Dental Lab Technicians
Drillers, Earth
Dyers
Electrotypers & Stereotypers
Evacuating & Grading
Filers, Polishers, Sanders
Forklift & Tow Motor Operators
Furnace men, Smelters, Pourers
Furriers, Glaziers
Graders & Sorters
Inspectors
Job & Die Setters, Metal
Locomotive Engineers & Firemen
Meat Cutters, Butchers
Millers, Millwrights
Molders, Metal
Motion Picture Projectionists
Oilers & Greasers
Painters, Mfg. Articles
Painters, Paperhangers
Photoengravers, Lithographers
Piano & Organ Tuners & Repairmen
Plasterers, Plumbers
Pressmen
Railroad Brakemen & Switchmen
Rollers & Finishers, Metal
Sailors & Deckhands
Sheet Metal Workers, Tinsmiths
Solderers
Shipfitters
Sign Painters & Letterers
Structural Metal Craftsmen
Taxicab Drivers, Chauffeurs
Textile Operatives
Tool & Die Makers
Welders & Flame Cutters
Machine Operatives
Former Members of the Armed Forces
Assemblers
Bakers, Blacksmiths, Boilermakers
Bottling & Canning Operatives
Bookbinders
Bus Drivers, Conductors, Motormen
Cabinetmakers, Carpenters
Cement & Concrete Finishers
Checkers, Examiners, Inspectors
Compositors & Typesetters
Cutting Operatives
Deliverymen & Routemen
Dressmakers & Seamstresses
Dry Wall Installers & Lathers
Electricians, Power Linemen
Engravers, except Photoengravers
Floor Layers
Foremen
Forgers & Hammerers
Furniture & Wood Finishers
Garage & Gas Station Workers
Heat Treaters, Annealers
Jewelers & Watchmakers
Laundry & Dry Cleaning Workers
Machinists, Mechanics, Repairmen
Metal Platers, Milliners
Mine Operatives
Motormen: Mine, Factory, Logging Camp
Opticians, Lens Grinders & Polishers
Packers & Wrappers
Parking Attendants
Pattern & Model Makers
Photographic Process Workers
Precision Machine Operatives
Power Station Operators
Punch & Stamping Press
Riveters & Fasteners
Roofers & Slaters
Sawyers, Sewers, Stitchers
Shoemaker Machine Operatives
Stationary Firemen
Shoe Repairmen
Stone Cutters & Stone Carvers
Tailors
Telephone Linesmen & Repairmen
Tile Setters
Truck Drivers
Winding Operatives
Upholsters

4. Laborers, Except Farm

Animal Caretakers, Except Farm
Construction Laborers
Freight & Material Handlers
Gardeners & Grounds Keepers
Lumbermen, Raftsmen
Vehicle Washers
Miscellaneous Laborers
Carpenter's Helpers
Fishermen & Oystermen
Garbage Collectors
Longshoremen & Stevedores
Stock Handlers, Teamsters
Warehousemen

5. Farmers, Farm Owners & Managers, Farm Foremen & Laborers

Farmers (Owners & Tenants)	Farm Foremen & Laborers
Farm Managers	Unpaid Family Workers
Farm Service laborers, Self-employed	

6. Service & Private Household Workers

Cleaning Service Workers	(Chambermaids, Maids, Cleaners, Janitors)
Food Service Workers	(Bartenders, Cooks, Dishwashers, Waiters, etc.)
Health Service Workers	(Assistants, Aides, Trainees, Midwives, etc.)
Personal Service Workers	(Stewardesses, Attendants, Porters, Bellhops, Barbers, Housekeepers, Bootblacks, Child Care, School Monitors)
Protective Service Workers	(Firemen, Policemen, Sheriffs, Marshals, Guards, Watchmen, Crossing Guards, Detectives, Bailiffs)

Appendix B: Data Collection Forms

Gambling Treatment Program—Iowa Department of Public Health

Crisis/Placement Screening/Admission

Name _____ (Last / First / M.I.) Form Completion Date _____

Address _____ SSN _____ Counselor _____

City, State, Zip _____ Phone (___) _____

1. Program
2. Client Number (birth date & last 4 digits of SSN) (yr yr mo mo day day ssn ssn ssn ssn)
3. Primary Facility
4. Date of Activity (MM/DD/YYYY) (mo mo day day yr yr yr yr)
5. Form Usage
   10 Crisis Gambler 11 Crisis Concerned
   20 Plmt Srng Gambler 30 Plmt Srng Concerned
   60 Admit Gambler 70 Admit Concerned
6. Original Invoice Number (CORRECTIONS ONLY)
7. Invoice Number
8. Waiting Time (in days) for for Crisis/Placement Screening/Admission

9. Birth date (MM/DD/YYYY)
9a. Age on the Date of Activity
11. County Codes on back 00=Out of State
12a. Gender 1=Male 2=Female
12c. Number of Children
13b. Relationship Status
   1 Single 3 Cohabiting 5 Divorced
   2 Married 4 Separated 6 Widowed
14a. Ethnicity
   0 Not Hispanic or Latino 3 Cuban
   1 Puerto Rican 5 Other Hispanic or Latino
   2 Mexican
14b. Race (client selects up to 3)
   1 Caucasian/White 4 Asian
   2 African Am/Black 5 Hawaiian or Pacific Islander
   3 American Indian 6 Alaskan Native
15. Highest Grade Completed
16. Employment Status
   01 Employed full time (35 or more hours per week)
   02 Employed part time (less than 35 hours per week)
   03 Unemployed (looking for work in past 30 days)
   04 Not in labor force due to—homemaker, student, retired, disabled, inmate, not looking for work in the past 30 days.
16a. Not in Labor Force Due to:
   00 N/A Client employed/looking for work
   01 Homemaker
   02 Student
   03 Retired
   04 Person has a disability
   05 Incarcerated
   06 Unemployed (not looking for work in the past 30 days.)
17. Occupation
   0 None 4 Laborers
   1 Prof/Managerial 5 Farm Owners/Laborers
   2 Sales/Clerical 6 Service/Household
   3 Crafts/Operatives
19. Months Employed During the Last 6 Months
   0=None 1-6=One to Six 8=Not in the labor force for last 6 months
20. Days of work or school missed in the last 6 months due to a gambling-related problem
   00=None 01-96=One to 96 days 97=97 or more days 98=Not in the labor force for last 6 months
20a. Jobs lost in the last five years due to a gambling-related problem
   00=None 01-29=One to 29+ 98=Not in the labor force in the last 5 years
21. Current gross/taxable individual monthly income
21a. Total household monthly income
22. Military Status 0 None 1 Veteran 2 In Reserves 3 Active Duty 4 Combat Veteran
23. Health Insurance 1 Yes 2 No
23a. If yes, does insurance cover gambling treatment? 1 Yes 2 No

25. Times arrested in the last 12 months.
25e. ALL PRIOR arrests
25f. All prior arrests gambling-related
25g. All prior arrests not gambling-related
25h. Have you ever been incarcerated? 1 Yes 2 No
26a. GA/Gamanon or similar meetings per month
27. Primary Source of Payment (Codes on back)
30. Source of Referral (Codes on back)
36. Based on this assessment, is client being recommended for treatment? 1 Yes 2 No
50. Bankruptcy or other defaults 1 Yes 2 No
51. Total Amount of Credit Card Debt
52. Total amount required to pay all overdue bills?
53. Total Debt
54. How much of total debt is a result of gambling?

__ Kinds of wagering in the last six months. Report the PERCENTAGE (of all money wagered) for each activity. Total MUST equal 100%

55a. % Casino table games
55b. % Slots
55c. % Live keno
55d. % Video: Poker/Keno/Blackjack
55e. % Non-Casino Cards
55f. % Bingo
55g. % Scratch tickets and Pull-tabs
55h. % Lotteries (includes numbers)
55i. % Racetrack (horses, dogs)
55j. % Sports
55k. % Stocks/Commodities/Futures
55l. % All Other

56. ☐☐☐☐☐☐ Total Amount Lost Weekly

56a. ☐☐☐ % Percent Lost Legally

56b. ☐☐☐ % Percent Lost Illegally

57. ☐☐ Frequency of ALL types of wagering during the last 30 days. (Codes listed below)

58. ☐☐☐☐☐☐ Most lost in any one week during the last 6 months.

59. ☐☐☐☐☐☐☐☐ Date Last Gambled
M M D D Y Y Y Y

60a. ☐☐ Gambler's age when first gambled. 00-99

60b. ☐ With whom did the gambler first gamble?
1 Parent 3 Relative 5 Friend 7 Self
2 Sibling 4 Family Group 6 Other 8 Business Group

60c. ☐ Was gambling an accepted activity growing up in the gambler's family?
1 Yes 2 No 0 Neutral

61. ☐☐ Gambler's age when gambling became a problem. 00-99 (00=Not a Problem)

62. ☐ Prior help sought for gambling problem?
1 Yes 2 No

63. ☐ Have you ever been treated for a drinking/drug problem? 1 Yes 2 No

63a. ☐☐☐☐☐☐☐☐ Last treatment date for drinking/drug problem.
M M D D Y Y Y Y

Frequency of types of behavior during the last 30 days.
(Codes listed below)

64a. ☐☐ Tobacco Use

64b. ☐☐ Alcohol Use

64c. ☐☐ Illicit ("street") drug use

64d. ☐☐ Prescription drug abuse

64e. ☐☐ Food abuse (self-starvation, binge, purge)

64f. ☐☐ Compulsive work (uses work to avoid/escape)

64g. ☐☐ Compulsive sex/romance/relationship

64h. ☐☐ Compulsive spending/shopping

64i. ☐☐ Physical violence

64j. ☐☐ Physical harm to self

Frequency Codes for Items 57 & 64a. – 64j.

10	None	14	Daily
11	1-3 Times in past month	15	2-3 Times per day
12	1-2 Times per week	16	4+ Times daily
13	3-6 Times per week		

County Codes for Question 11

00-Does not live in Iowa

01-Adair	34-Floyd	67-Monona
02-Adams	35-Franklin	68-Monroe
03-Allamakee	36-Fremont	69-Montgomery
04 Appanoose	37-Greene	70-Muscatine
05-Audubon	38-Grundy	71-O'Brien
06-Benton	39-Guthrie	72-Osceola
07-Black Hawk	40-Hamilton	73-Page
08-Boone	41-Hancock	74-Palo Alto
09-Bremer	42-Hardin	75-Plymouth
10-Buchanan	43-Harrison	76-Pocahontas
11-Buena Vista	44-Henry	77-Polk
12-Butler	45-Howard	78-Pottawattamie
13-Calhoun	46-Humboldt	79-Poweshiek
14-Carroll	47-Ida	80-Ringgold
15-Cass	48-Iowa	81-Sac
16-Cedar	49-Jackson	82-Scott
17-Cerro Gordo	50-Jasper	83-Shelby
18-Cherokee	51-Jefferson	84-Sioux
19-Chickasaw	52-Johnson	85-Story
20-Clarke	53-Jones	86-Tama
21-Clay	54-Keokuk	87-Taylor
22-Clayton	55-Kossuth	88-Union
23-Clinton	56-Lee	89-Van Buren
24-Crawford	57-Linn	90-Wapello
25-Dallas	58-Louisa	91-Warren
26-Davis	59-Lucas	92-Washington
27-Decatur	60-Lyon	93-Wayne
28-Delaware	61-Madison	94-Webster
29-Des Moines	62-Mahaska	95-Winnebago
30-Dickinson	63-Marion	96-Winneshiek
31-Dubuque	64-Marshall	97-Woodbury
32-Emmet	65-Mills	98-Worth
33-Fayette	66-Mitchell	99-Wright

Primary Source of Payment Codes for Item 27

00-No Charge	18-Other Government
11-Self Pay	21-Private Pay
12-BC/BS	22-State Non-Unit Reimbursement
13-HMO	23-Medicare/Medicaid Eligible
14-Other Health Insurance	24-Medicare/Non-Medicaid Eligible
15-Medicaid Eligible	25-State Unit Reimbursement
16-Medicare Eligible	99-Unknown
17-Workers Compensation	

Source of Referral Codes for Item 30

21	Self
22	Health Care Provider
23	Community Mental Health Clinic
24	Alcohol/Drug Abuse Provider
25	Other Individual
26	Employer/EAP
27	School
30	Other Criminal Justice/Court
38	Other Community
39	Spouse/Partner
44	Debt Counselor
46	GA/Gamanon
48	Helpline

Iowa Gambling Treatment Program—Iowa Department of Public Health
Gambling Treatment Services

Name _____ Form Completion Date _____
Last First M.I.

Address _____ SSN _____ Counselor _____

City, State, Zip _____ Phone (___) _____

1. Program | **2. Client Number** (birth date and last four digits of SSN) | **3. Primary Facility** | **4. Month and Year of Service**

yr yr mo mo day day ssn ssn ssn ssn | M M Y Y Y Y

5. Form Usage
16 Crisis Gambler
26 Print Smg Gambler
66 Admit Gambler
96 Follow-up
17 Crisis Concerned
36 Print Smg Concerned
76 Admit Concerned

6. Original Invoice No.
CORRECTIONS ONLY

7. Invoice Number

27a. Funding Source
0 Non-Billable
1 State Unit Reimbursement
2 State Non-Unit Reimbursement

SERVICES PROVIDED DURING REPORT MONTH

37. CLIENT SERVICES

SERVICE	MINUTES	SESSIONS
Crisis Intervention		
Placement Screening Intake, Assessment, Evaluation		
Individual Counseling		
Group Counseling		
Family Counseling		
Continuing Care: Individual		
Group		
Follow-up Interview (allowed only if interview was completed)		

70. OTHER SERVICES PROVIDED OR RECOMMENDED/ NON-BILLABLE TO THE IOWA GAMBLING TREATMENT PROGRAM

☐ Gamblers Anonymous/Gamanon or Similar Recovery Group
1 Yes 2 No

☐ Debt Management/Financial Counseling
1 Yes 2 No

☐ Substance Abuse Counseling
1 Yes 2 No

☐ Mental Health Counseling
1 Yes 2 No

☐ Domestic Violence Counseling
1 Yes 2 No

☐ Sexual Addiction Counseling
1 Yes 2 No

Gambling Treatment Program—Iowa Department of Public Health

Discharge/Follow-up

Name _____ Form Completion Date _____
Last First M.I.

Address _____ SSN _____ Counselor _____

City, State, Zip _____ Phone (___) _____

1. Program | **2. Client Number** (birth date & last 4 digits of SSN) | **3. Primary Facility** | **4. Date of Activity (MM/DD/YYYY)**

2. Client Number: yr yr mo mo day day ssn ssn ssn ssn
4. Date of Activity: mo mo day day yr yr yr yr

5. Form Usage
80 Discharge Gambler 81 Discharge Concerned Person
90 Follow-Up Gambler 91 Follow-Up Concerned Person

6. Original Invoice Number (CORRECTIONS ONLY)

7. Invoice Number

9. Birth date (MM/DD/YYYY)

11. County Codes on back 00=Out of State

13b. Relationship Status
1 Single 3 Cohabiting 5 Divorced
2 Married 4 Separated 6 Widowed 7 Other

15. Highest Grade Completed

16. Employment Status
01 Employed full time (35 or more hours per week)
02 Employed part time (less than 35 hours per week)
03 Unemployed (looking for work in past 30 days)
04 Not in labor force due to—homemaker, student, retired, disabled, inmate, not looking for work in the past 30 days.

16a. Not in Labor Force Due to:
00 N/A Client employed/ looking for work
01 Homemaker
02 Student
03 Retired
04 Person has a disability
05 Incarcerated
06 Unemployed (not looking for work in the past 30 days.)

17. Occupation
0 None
1 Prof/Managerial
2 Sales/Clerical
3 Crafts/Operatives
4 Laborers
5 Farm Owners/Laborers
6 Service/Household

19. Months Employed since admission/discharge
(See the manual for available codes)

20. Days of work or school missed due to a gambling-related problem since admission/discharge.

20a. Jobs lost due to a gambling-related problem since admission/discharge.

21. Current gross/taxable individual monthly income

21a. Total household monthly income

25. Times arrested since admission/discharge.

25f. Number of arrests gambling-related since admission/discharge.

25g. Number of arrests not gambling-related since admission/discharge.

26a. GA/Gamanon or similar meetings per month since admission/discharge

30. Reason for Discharge
21 Completed Treatment, Treatment Plan Completed
22 Completed Treatment, Treatment Plan Substantially Completed
23 Referred Outside
24 Program Decision Due to Lack of Progress
25 Client Left
26 Incarcerated
27 Death
28 Other

36. (Answer for Gamblers only) Was a concerned person also involved in the treatment process?
1 Yes 2 No (Form usage 80 and 90 only)

In Client's Opinion, How Beneficial Was Our:
Codes: 0-Did not receive 1 Very Beneficial 2-Beneficial 3 Not Beneficial 9 Don't Know

42a. Individual Counseling Code 0 thru 3 or 9

42b. Family Counseling Code 0 thru 3 or 9

42c. Group Counseling Code 0 thru 3 or 9

42d. Education Classes Code 0 thru 3 or 9

42e. Overall Rating (0 not allowed for this item)

COMPLETE FOR FOLLOW-UP ONLY

43. Follow-up Interview was not completed
30 N/A, Interview Completed
31 Unable to Locate
32 Client Located but Refused
33 Other Person Refused
34 Client Incarcerated
38 Other

44. Follow-up Interview completed with:
11 Client
12 Significant Other
13 Other Household Member
18 Other

45. Follow-up Type of Interview
5 Telephone
6 In Person
7 Letter or survey
8 Other

46. Has the client been admitted to a gambling treatment program other than your own since discharge from your program?
1 Yes 2 No

48a. Number of gambling treatment program admissions since discharge from your program.
0=Less than one 1-7=One to seven or more 8=Not admitted

48b. If client was admitted to a different gambling program, report the months since that discharge.
00-Less than one month 01-25=One to 25+ 98=Not admitted

50. Bankruptcy or other defaults since admission/discharge? 1 Yes 2 No

51. Total Amount of Credit Card Debt

52. Total amount required to pay all overdue bills

53. Total Debt

54. How much of total debt is a result of gambling?

Kinds of wagering since admission/discharge.
Report the PERCENTAGE (of all money wagered) for each activity.
Total MUST equal 100%

55a.	☐☐☐ %	Casino table games
55b.	☐☐☐ %	**Slots**
55c.	☐☐☐ %	**Live keno**
55d.	☐☐☐ %	**Video: Poker/Keno/Blackjack**
55e.	☐☐☐ %	**Non-Casino Cards**
55f.	☐☐☐ %	**Bingo**
55g.	☐☐☐ %	**Scratch tickets and Pull-tabs**
55h.	☐☐☐ %	**Lotteries (includes numbers)**
55i.	☐☐☐ %	**Racetrack (horses, dogs)**
55j.	☐☐☐ %	**Sports**
55k.	☐☐☐ %	**Stocks/Commodities/Futures**
55l.	☐☐☐ %	**All Other**

56. ☐☐☐☐☐☐ **Total amount lost weekly since admission/discharge.**

57. ☐☐ **Frequency of ALL types of wagering during the last 30 days.** (Frequency codes listed at right)

58. ☐☐☐☐☐☐ **Most lost in any one week since admission/discharge.**

59. ☐☐☐☐☐☐☐☐ **Date Last Gambled**
M M D D Y Y Y Y

63. ☐ **Have you ever been treated for a drinking/drug problem?** 1 Yes 2 No

Frequency of types of behavior during the last 30 days.
(Codes listed at right)

64a.	☐☐	**Tobacco Use**
64b.	☐☐	**Alcohol Use**
64c.	☐☐	**Illicit ("street") drug use**
64d.	☐☐	**Prescription drug abuse**
64e.	☐☐	**Food abuse (self-starvation, binge, purge)**
64f.	☐☐	**Compulsive work (uses work to avoid/escape)**
64g.	☐☐	**Compulsive sex/romance/relationship**
64h.	☐☐	**Compulsive spending/shopping**
64i.	☐☐	**Physical violence**
64j.	☐☐	**Physical harm to self**

County Codes for Question 11

00-Does not live in Iowa

01-Adair	34-Floyd	67-Monona
02-Adams	35-Franklin	68-Monroe
03-Allamakee	36-Fremont	69-Montgomery
04 Appanoose	37-Greene	70-Muscatine
05-Audubon	38-Grundy	71-O'Brien
06-Benton	39-Guthrie	72-Osceola
07-Black Hawk	40-Hamilton	73-Page
08-Boone	41-Hancock	74-Palo Alto
09-Bremer	42-Hardin	75-Plymouth
10-Buchanan	43-Harrison	76-Pocahontas
11-Buena Vista	44-Henry	77-Polk
12-Butler	45-Howard	78-Pottawattamie
13-Calhoun	46-Humboldt	79-Poweshiek
14-Carroll	47-Ida	80-Ringgold
15-Cass	48-Iowa	81-Sac
16-Cedar	49-Jackson	82-Scott
17-Cerro Gordo	50-Jasper	83-Shelby
18-Cherokee	51-Jefferson	84-Sioux
19-Chickasaw	52-Johnson	85-Story
20-Clarke	53-Jones	86-Tama
21-Clay	54-Keokuk	87-Taylor
22-Clayton	55-Kossuth	88-Union
23-Clinton	56-Lee	89-Van Buren
24-Crawford	57-Linn	90-Wapello
25-Dallas	58-Louisa	91-Warren
26-Davis	59-Lucas	92-Washington
27-Decatur	60-Lyon	93-Wayne
28-Delaware	61-Madison	94-Webster
29-Des Moines	62-Mahaska	95-Winnebago
30-Dickinson	63-Marion	96-Winneshiek
31-Dubuque	64-Marshall	97-Woodbury
32-Emmet	65-Mills	98-Worth
33-Fayette	66-Mitchell	99-Wright

Frequency Codes for Items 57 & 64a. – 64j.

10	None	14	Daily
11	1-3 Times in past month	15	2-3 Times per day
12	1-2 Times per week	16	4+ Times daily
13	3-6 Times per week		

Appendix C: Detailed Description of Data Changes

Crisis Intervention Changes

Variable = Ethnicity

There were two cases with an Ethnicity Code of "4" not recognized as coding choices for this item. During the program, both codes “4” and “5” were used to code ethnicity as “Other Latino”. Two cases had the ethnicity code changed to “5” from “4”.

Variable = Race One

There were seven cases with a Race code of "8" not recognized as coding choices for this item. During the program, code “8” was used to designate “Other Race”. This option was added to the code book and the records coded as “8” were unchanged.

Variable = Primary Source of Payment

There are four cases with a code of "19" not recognized as coding choices for this item. During the program, both codes “19” and “25” were used to code payment source as “State Unit Reimbursement”. The following records were changed from code “19” to code “25”

Admission Changes

There were 19 cases that had recorded dates of birth in the period from 1997 to 1999. These were recoded to blanks. One case had a recorded date of birth in 1666. This was recoded to 1966.

Placement Screening Changes

One case had an illegal frequency code for the use of illicit drugs (item 64c). The entry was a "1". Given that only 5% of the subjects reported using illicit drugs in the last 30 days and given that the code for no use is "10", the entry was changed to a “10” (No use).

Reducing Admissions Data to First Admission

Five duplicated admissions records were eliminated.

Reducing Placement Data to First Placement

Five duplicated placements records were eliminated.

To resolve the conflict between changes in type of client between successive placement screenings, the initial placement screening record of two participants was identified as their initial treatment episode. Placement forms from previous contacts where no services resulted were eliminated.

Reducing Admissions Data to Second Admission

The date of the beginning of the second treatment episode for 18 participants could not be determined by the standard rules described in the report. The second admission was determined by inspection of each client’s service records.

First Admission Dataset Inconsistencies

Percent of Money Wagered by Type of Gambling

The reported percentages should add to 100%. To allow for slight arithmetic errors, we set the tolerance for inconsistency to ± 5%. Entries that exceeded this tolerance were recoded to missing values (eliminated). Three records summed to less than 95% for item 55; all item 55 components were recoded to missing. Twenty-one records summed to more than 105% for item 55; all item 55 components were recoded to missing. A large number of records with components that summed to 100%±5% reported missing data rather than zero for some components. For these records, missing data was recoded as “0”.

Arrest Histories

Ten people reported that that their total arrest history was less than the number of times they

were arrested in the last year. All arrest data (past year, total, gambling, non-gambling) for these individuals was recoded as missing.

After making the above corrections, we identified four people who reported that their total arrest history was less than the sum of their gambling and non-gambling arrests. All arrest data (past year, total, gambling, non-gambling) for these individuals was recoded as missing.

We also identified an additional three people who reported that their total arrest history was more than the sum of their gambling and non-gambling arrests. All arrest data (past year, total, gambling, non-gambling) for these individuals was recoded as missing.

Debt

Thirty-six records reported greater credit card debt than total debt. All debt information (credit card, total, bills) was recoded as missing. After we made the previous correction, we identified 17 records that indicated that the amount needed to pay off bills was greater than total debt. All debt information (credit card, total, bills) was recoded as missing for these records.

Income

Six people reported that their personal income was greater than the household income. Household income was changed to equal personal income.

Age Related Information

We noted that the reported age at admission did not equal age computed from the reported date of birth. Given that there were fewer missing observations in the date of birth information, we decided to recompute age at admission from the date of birth and the date of admission. After this computation, we identified three people who reported that their age at admission was younger than their age the first time they gambled. Age when the participant first gambled was eliminated for these records. We identified 18 people who reported that age when a gambling problem developed was older than their age at admission to the IGTP. Age when a problem first developed was eliminated for these records. Seven records reported that a problem developed before the age a client reported that they first gambled. The age responses for these two items were eliminated.

Second Admission Dataset Inconsistencies

Percent of Money Wagered by Type of Gambling

One record summed to less than 95% for item 55; all item 55 components were recoded to missing. No data summed to more than 105%.

Arrest Histories

One person reported that that their total arrest history was less than the number of times they were arrested in the last year. All arrest data (past year, total, gambling, non-gambling) for that individuals was recoded as missing.

Debt

Three people reported that their credit card debt was more than their total debt. All debt information (credit, bills, total) was recoded as missing. Three people reported that the money required to acquit their current bills was more than their total debt. All debt information (credit, bills, total) was recoded as missing.

Age Related Information

Three people reported that they developed a problem with gambling at an earlier age than when they reported first gambling. Age data for these two variables was recoded as missing.

Services Delivered Dataset Inconsistencies

Six cases had no identifiers. Two of these were completely blank. The other four had referral information but nothing else. All these records were eliminated. One record had an illegal form specification of 77. The correct form "76" was identified by Frank Biagoli and corrected. Three records had a form specification of 96 but contained only minute and session information for a single continued care individual session. Consistent with client information, we changed the form type to 66.

Two records had a single session but the number of minutes of crisis intervention time was entered as zero. We edited these records to reflect an average time per session of twenty minutes.There were six records of crisis intervention services that had the minutes of service recorded but the number of sessions was zero or blank. In all these instances, the number of minutes was consistent with a single session. We edited these records to indicate a single session.

The services data set contained 47 people who received services as both concerned others and gamblers. When we could reasonably determine the correct type of client from an examination of the individual services records and information from other data sets, we recoded all services to match this type. For 30 people the modal value of type of service matched type of client recorded at admission/placement.

For six clients, services were evenly split between gambler and concerned other services and the services were recoded to match the admission/placement type. For three clients, the modal value for type of services was inconsistent with admission or placement type of client records. Examination of dates revealed that these three individuals all received services as concerned others prior to services as gamblers and they were recoded as gamblers. In one case only, there were 11 "concerned other" records prior to the first "gambler" admission and these were deleted.

There were eight people who received services as concerned others and gamblers but who did not have admission or placement data. Of those clients, five people received a majority of their services as one type and therefore all services were recoded to match this type. For the remaining three clients, services were evenly split between gambler and concerned other services. With no other data on these clients, no determination of the correct type was possible and they were left unchanged.

Discharge Dataset Inconsistencies

The discharge data and follow-up data collection forms shared common items. Six records in the discharge dataset contained responses limited to the follow-up interview. The inappropriate responses were eliminated from the data set.

One discharge record identified a provider coded '016' which was not a legitimate entry. Inspection of the record by IGTP staff indicated that the provider and primary facility information had been switched on that record. The information was corrected.

The discharge record information shares items with the admission form. The data quality analyses for the discharge records parallels analyses for the admissions data (see above). The identification and correction of problems in the discharge records parallels that of the admissions data.

Percent of Money Wagered by Type of Gambling

Nine records reported that the sum of their wagering activity time allocation was less than 95%. All data from components of item 55 was recoded as missing. Missing data in records that reported that the sum of their wagering activity allocation was between 95 and 100% was recoded as "0".

Arrest Histories

Ten people reported that the sum of their gambling and non-gambling arrests since admission exceeded their total number of arrests since admission. We changed individuals' total arrests to match the sum of gambling and non-gambling arrests since admission.

One person reported that the sum of their gambling and non-gambling arrests since admission was less than their total number of arrests since admission. We changed individuals' total arrests to match the sum of gambling and non-gambling arrests since admission.

Debt

Five people reported that their credit card debt was greater than their total debt. We recoded all debt (credit, bills, total) data as missing. Three people reported that the total amount needed to pay bills was greater than the total debt. We recoded all debt (credit, bills, total) data as missing.

Income

Two individuals reported that their total household income was less than their individual income. We changed household income to equal individual income.

Age Related Information

Ten individuals reported that their year of birth was within 3 years of the activity date reported on the discharge form. We recoded the birthdates for these clients as missing:

Inconsistent Client Type

One respondent was recorded as a crisis gambler on one discharge record and as a concerned other on another record. Similar inconsistencies in this client's treatment records were also observed. The client was clearly treated as a crisis gambler and mentioned only occasionally as a concerned other. Both of his discharge records indicated that he left treatment and never reported on his status at time of discharge.

Follow-up Dataset Inconsistencies

The follow-up record information shares items with the admission form. The data quality analyses for the follow-up records parallels analyses for the discharge data (see above). The identification and correction of problems in the discharge records parallels that of the discharge data. Of the total of 494 records, five provided no client number and we deleted them.

Percent of Money Wagered by Type of Gambling

The information on money wagered across types of gambling was not answered for 246 of the 489 records. Another 144 records reported zero for all types of gambling components of item 55. All together, 80% of the follow-up forms provided no information on this type of gambling behavior. The records with components that summed to within 5% of 100% with components missing had the missing data recoded to zero.

Debt

Seven records reported greater credit card debt than total debt. All debt information (credit card, total, bills) was recoded as missing.

Income

Two people reported that their personal income was greater than the household income. Household income was changed to match personal income.

Appendix D: Collated Admission and Placement Information

The admission and placement screening interviews used the same data collection form and procedures. People entering the program provided the basic demographics and behavioral information at either or both interviews. We merged the two data sets to obtain a single initial set of information for each identified IGTP participant and a single set of information at the beginning of the second treatment episode for participants with more than one course of treatment. For ease, we refer to the information from either source as "admission" data. The process of identifying and combining first and second admissions is described below, followed by the results of applying the data integrity procedures to the collated data sets.

Reducing Admissions Forms to First Admission

The process of reducing the admission information to the initial admission required three steps. First, we eliminated from the 2,196 admission records, 34 records that did not have a unique client number. Second, we created a single record for each unique client by aggregating the 2,162 records by client number. We retained the client number, the first activity date, and the count of the number of admissions. Third, the aggregated file of 1,875 clients was matched to the original admissions file by client number and activity date to create an initial admissions file. Information from subsequent admissions is not included in this file. The matching process identified five instances in which the initial admission record was duplicated in the total file of admissions data (See Appendix C).

The majority of clients (87%) were admitted only once to the program. The range of multiple admissions was two to five admissions. Only a few people (N = 38) were admitted more than twice.

Number of Admissions	Number of Clients	Percent of Clients
1	1637	87.3
2	200	10.7
3	29	1.5
4	7	0.4
5	2	0.1
Total	**1875**	**100**

We expected that clients would change their self-reported identification as either a gambler or a concerned other over successive contacts with the program. There was only one client whose two admissions records were inconsistent with respect to type of client. A review of this client's complete records indicated that although she was initially admitted as a gambler, her service records identify her as a concerned other. A second admission, within a month of the first admission, also identified her as a concerned other. There was no record of treatment provided to her subsequent to the second admission. We believe the inconsistency was due to a recording error on the initial admission and we changed the type of client to concerned other.

Reducing Placement Screening Forms to First Placement Screening

The process of reducing the placement information to the initial placement required the same three steps. First, we eliminated from the 2,404 placement records, the 30 records that did not have a unique client number. Second, we created a single record for each unique client by aggregating the 2,374 records by client number. We retained the client number, the first activity date variable, and the count of the number of placements. Third, the aggregated file of 2,099 clients was matched to the original placements file by client number and activity date to create an initial placements file. Information from subsequent placements is not included in this file. The matching process identified five instances in which the initial placement record was duplicated in the total file of placements data. The duplicated placements records identified below were eliminated (See Appendix C).

The majority of clients (90%) went through the placement screening and evaluation phase only once. The range of multiple placements was two to eight placements. Only a few people (N = 36) had more than two placement screening interviews.

Number of Placements	Number of Clients	Percent of Clients
1	1882	89.7
2	181	8.6
3	22	1.0
4	9	.4
5	4	.2
8	1	.0
Total	**2099**	**100.0**

There were only two clients whose placement records were inconsistent with respect to type of client. The differences in type of client were in the expected direction of "concerned other" to "gambler." A review of these clients' complete records indicated that they initially identified themselves as concerned others. They received no services beyond the placement interview on their first enrollment into the treatment system. At the next enrollment, both identified themselves as gamblers and received services. In both cases, we did not include the initial episode in further analyses. For purposes of analysis, their initial treatment is their first when they were identified as a gambler.

Obtaining First Treatment Episode Demographics

Patients entering treatment provided demographic and behavioral information on a form common to both admissions and placement screening interviews. Patients might have either or both of these forms representing any of one or more treatment episodes. The following describes the procedure used to determine the source of the earliest demographic and behavioral information.

The first admissions and first placement screening records were merged into a single file. The composition of the file included five different groups of records for the 2,730 participants depending on the agreement between the admission and placement screening files.

Group 1 – The participant had only admission records

Group 2 – The participant had only placement screening records

Group 3 – The participant had both types of records and the earlier contact date was at the completion of the admission interview

Group 4 – The participant had both types of records and the earlier contact date was at the completion of the placement interview

Group 5 – The participant had both types of records and the contact date was the same for both forms

For Groups 1 and 2 the only available record was used as the initial demographic data. For Groups 3 and 4 the information from the interview with the earlier date was used. For Group 5, we used the information on the admission record after assuring that there were no differences between the admission and placement records.

Obtaining Second Treatment Episode Demographics

The identification of the second treatment episode was more difficult. Participants with only a single admission or placement screening record (N = 1,390, 51% of the total 2,730 identified participants) or a single pair of records with the same date (N = 122, 4%) were readily identified as having only a single episode and did not need to further review. The examination of participants with multiple records was complicated by the GTRS procedures that called for a procedural discharge if the participant did not receive services within 30 days of admission to treatment. In practice, this procedure was unevenly applied and resulted in multiple admission and placement screenings taking place within a relatively short time without intervening treatment services. In many cases, we were able to identify these "repeated starts" rather than repeated treatment episodes by applying a 30 day boundary to indicate the same episode. We also found that legitimate second episodes were indicated when the separation between intake interviews

was separated by 10 weeks or more. Our review of the accuracy of applying standard rules to determine the start of the second treatment episode revealed a few instances when the rules did not accurately identify the second admission. The identification of these episodes is detailed in Appendix C. There were 326 participants (12%) who had two or more treatment episodes.

In brief, for Group 1 participants with two admission records, the second date was taken from the accumulation record which obtained both the earliest and latest dates of admission. Similarly, for Group 2 participants with two placement records, the second episode began with the latest placement date. For Group 1 and 2 participants with more than 2 treatment episodes (admission only participants N = 10; placement only N = 3), we reviewed the individual records for the correct date of the second episode. We computed the difference between the earliest admission and placement dates for Group 3 and 4 participants. If the dates were 10 weeks or more apart, a second episode was designated. We examined the 37 Group 3 and 78 Group 4 participants to determine the date of the second episode. In most cases the second episode was easily identified. However, 13 cases had unusual interruptions in treatment and the second episode date could only be determined by inspection. An examination of participants with both admission and placement screening forms in a single episode revealed cases with delays between completing the two forms that were as much as two months apart. Since these cases received no intervening treatment, they could not be considered as separate treatment episodes.

Data Integrity: First and Second Admissions

We applied our data integrity analyses to the demographic and behavioral information collated from the admissions and placement screening data at the beginning of the first and second treatment episodes (i.e., first and second admissions into treatment). The analyses indicated inconsistencies among the several measures in each of the areas of income, arrests, debts, gambling history, and wagering activities. In most cases, inconsistencies were resolved by eliminating the conflicting information. The effect of elimination is that the overall characteristics of the sample are based on slightly fewer cases but the capacity to analyze the relationship among measures is protected. A small number of eliminations in a relatively large information base would not perceptibly alter the characteristics of the total participants. When possible, we resolved inconsistencies by using information from the several items in an area. For example, in a few instances participants reported their family incomes as less than their individual income. Rather than eliminate both measures of income, we elected to assume that the family income was at least as large as the individual income and replaced family income with the larger individual income. We considered that this strategy was a reasonable compromise between fostering completeness of the information with little risk of generating inappropriate data. Appendix C provides a detailed summary of data quality improvements to the first and second admissions information.

Appendix E: Practice Guidelines for Treating Gambling-Related Problems—An Evidence-Based Treatment Guide for Clinicians[15]

The following guidelines represent the most current information about practice guidelines. As readers will see, there is disagreement about the merit of practice guidelines in the addictions; however, it does appear that guidelines for best practices are here to stay. The results of the Iowa Gambling Treatment Program evaluation provide unique insight into those areas of practice that are most relevant for Iowa practitioners. It is likely that these insights will be instructive for the rest of the country as well. Since the preceding evaluation represents only the first major step in evaluating the treatment program, the following guidelines reflect both practice principles in general and practice guidelines that are more specific to Iowa. Clinicians can use these resources to select the areas of practice that are most relevant to their clinical responsibilities.

Introduction: The Purpose of Practice Guidelines

Sackett reminds us that evidence-based practice is the conscientious, explicit, and judicious use of current "best evidence" in making decisions about delivering care to an individual (e.g., patient/client) or group (e.g., family). Working in an evidence-based practice means that clinicians integrate personal clinical expertise with the best available external clinical evidence from systematic research (Sackett, Rosenberg, Grey, Haynes, & Richardson, 1996).

This treatment guide is intended to assist clinicians with the *identification, assessment and treatment* of disordered gambling. Specifically, we have developed this set of practice guidelines for professionals within the Iowa Gambling Treatment Program who provide counseling for adults at-risk, affected by, or suffering from health-related gambling problems. In addition, this document addresses the following three areas of clinical concern: (1) **counseling issues with special populations**, (2) **intervention strategies in differing practice settings**, and (3) the **role of pharmacotherapy** in the treatment of gambling disorders.

While clinical investigators search for the most effective and specific clinical techniques for dealing effectively with gambling-related problems, it is essential to remind readers that non-specific or common factors account for a considerable amount of treatment outcome (e.g., Frank, 1961; Hubble, Duncan, & Miller, 1999). For example, Hubble et al. (1999) advise that common factors significantly influence treatment outcome. In addition to the specific effects associated with the treatment model or techniques, they suggest that non-specific to treatment technique factors include: (1) the extra-therapeutic attributes that clients bring with them to treatment (e.g., education, family support, etc.); (2) relationship factors displayed by the treatment provider (e.g., empathy, caring, warmth, etc.); and (3) the hope, expectancies and placebo effects that often associate with the start of treatment. A full discussion of the non-specific factors that influence treatment outcome is beyond the scope and intent of this guide. However, there are many useful resources for readers interested in the factors common to successful treatment (e.g., Frank, 1961; Havens, 1989; Hubble et al., 1999; Imhof et al., 1984; Maltsberger & Buie, 1974; Miller, 2000; Miller et al., 1995; Polanyi, 1967; Schon, 1983; Shaffer, 1994; Shaffer & Robbins, 1991; Shaffer & Robbins, 1995). We encourage clinicians to review this material, cultivate their non-specific treatment skills and examine these skills within the context of clinical supervision and consultation. Integrating non-specific treatment skills with gambling-specific treatment strategies holds the potential to maximize treatment benefits.

We also encourage readers to remember that this document represents practice guidelines and not agency program standards for professional

[15] This extended work on best practices was supported by the Iowa Department of Public Health, the Massachusetts Council on Compulsive Gambling, and the Massachusetts Department of Public Health.

service administration. Practice guidelines are designed for clinicians working with individuals or groups during a clinical encounter. Alternatively, program standards provide a framework for accountability between agency program managers and their funding sources through compliance measurement of a range of financial, personnel, and service indicators. Program standards also provide a vehicle for program quality improvement.

It is important to note that practice guidelines represent only one available tool to promote and shape optimal treatment. For example, in addition to program standards previously mentioned, other structural influences that shape the conduct of clinical practice include society's conceptualization of illness, ethical frameworks often promulgated by professional organizations, funding support, professional credentialing and continuing education. Practice guidelines provide a foundation for more multifaceted and knowledgeable clinical interventions, and thus have the potential to improve the quality of care and health recovery outcomes for people seeking help for their gambling and its adverse consequences.

Further, this document represents an evidence-based approach to practice guidelines for gambling-related problems. Consequently, it reflects contemporary efforts throughout health care to integrate the art and science of therapy (Sackett, Strauss, Richardson, & Haynes, 2000). A central feature of evidence-based practice is the identification and appraisal of original systematic research related to the specific clinical condition. With respect to treating gambling-related disorders, the situation is particularly challenging and complex because this is a nascent field of research; consequently, there is a paucity of gambling treatment outcome studies available to guide clinical practice. In addition, there is the strong temptation to extrapolate clinical outcome evidence from the broader, more mature and rigorously investigated addictions and mental health domains.

Inclusion Criteria for Gathering Evidence

Under this condition of uncertain and developing research, to evaluate the effectiveness of an intervention and compare treatments to determine those most worthwhile for clinical practice, the authors considered research criteria in four primary areas: (1) types of studies; (2) participants; (3) interventions; and (4) outcome measures (Oakey-Browne, Adams, & Mobberley, 2001). In general, studies eligible for inclusion in this report were published in peer-reviewed journals, reports from prominent agencies and only occasionally conference proceedings. **Randomized trials** were weighed with maximum importance. Randomized clinical trials of gambling treatments are few in number but engender a high degree of confidence to guide clinical practice because this study design minimizes systematic bias due to design influences, sample selection biases, or sample attributes. Despite these methodological advantages, randomized clinical trials can reflect unrealistic clinical circumstances. Therefore, this review also incorporates published gambling **case reports** and **case control studies** that offer a moderate degree of confidence. Participants in these studies were predominately adults; the instruments for diagnosis in these studies were those based on one of the recent editions of the Diagnostic and Statistical Manual of the American Psychiatric Association (e.g., American Psychiatric Association, 2000). The eligible interventions were psychological and pharmacological treatments. Treatment outcomes included gambling abstinence or moderation and a range of associated psychological and social behaviors. Finally, these guidelines include research that focused on substance use disorders. Although these substance abuse and dependence studies are well regarded in the broader addiction field, it is possible that research on treatment for substance use disorders does not apply to gambling treatments. Therefore, this body of research must be viewed with a certain level of skepticism as to the value of this research for gambling treatment providers; consequently, this evidence requires further gambling-specific study.

Classifying the Evidence

The guidelines that follow reflect a broad framework for clinical decision-making; this framework organizes supporting research by ***classifying evidence into strong, moderate or weak categories***. Taken together, we believe that these criteria strike the right balance at this stage of maturity in the gambling treatment field, and have the potential to strengthen clinical decision-making and enhance clinical care.

Gambling, Gambling Disorders and Gambling Treatment: An Introduction

During recent years, there has been a relatively rapid and profound expansion of legalized gambling within Iowa and throughout the United States and Canada. By using the Internet, Iowa residents also have ready access to gambling in virtual casinos that also provide them with the opportunity to bet on sports. Iowa citizens have access to risky day-trading in financial markets. Each type of gambling opportunity presents its own special and shared risks. Consequently, while the level of possibility varies, individuals who gamble are at some risk for a variety of physical health problems. For example, patients with gambling problems can suffer from repetitive movement disorders, other orthopedic problems, sexual dysfunction, gastro-intestinal distress, and circulatory difficulties or other physical maladies (e.g., Daghestani, 1987a; Pasternak & Fleming, 1999; Petry, 2000a).

Throughout this document, the term ***disordered gambling*** is intended to describe the spectrum of gambling-related health problems that can present in clinical practice; the word ***disorder*** reflects the status of gambling within the psychiatric nomenclature (i.e., the Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association, 1994, 2000). These conditions deserve the attention of mental health and addiction clinicians as well as primary care practitioners (e.g., Daghestani, 1987b). The terms ***problem and pathological gamblers*** are widely used, though problem gambling is not currently identified as a disorder within the diagnostic nomenclature. Nevertheless, disordered gambling is a term that reflects both pathological gambling and its subclinical counterpart, problem gambling.

The estimated prevalence rates in the general adult population are stable throughout the world. Regardless of research strategy and researcher, the prevalence of the most serious form of gambling disorder (i.e., pathological gambling) is about 1% throughout the world (Shaffer & Korn, 2002). However, this prevalence has evidenced a slow but upward trend. For example, comparing Shaffer and Hall's prevalence estimates for studies up to 1999 with their earlier estimates up to 1997, past year mean prevalence estimates of level 3 gambling, clinically termed pathological gambling, rose from 1.14 to 1.46, a 28% increase (Shaffer & Hall, 2001). However, when outliers were removed from this analysis, the estimated rate remained at 1.1%. Among youth, college and institutional groups the estimated prevalence is significantly higher than their general population adult counterparts, but it has held steady during the past several decades (Shaffer & Hall, 2001; Shaffer et al., 1997a; Shaffer, Hall, & Vander Bilt, 1999; Shaffer & Korn, 2002). Given the considerably higher prevalence rates among certain population segments, Korn and Shaffer have noted the need for concern about the impact of gambling on vulnerable groups and populations with special needs (David A. Korn, 2000; Korn & Shaffer, 1999b; Korn & Skinner, 2000). Later in this paper, in the section focusing on special populations, we will examine in more detail a variety of population segments that evidence increased vulnerability to gambling-related problems or distinctive treatment needs. For now, clinicians should note that there is a potential higher risk for gambling disorders among those seeking treatment for a variety of mental disorders—even if the treatment seeking is apparently unrelated to gambling.

Approach to Practice Guidelines

The development of clinical strategies for the effective treatment of disordered gambling is in its very early stages. The National Research Council noted the lack of available clinical research to inform clinical decisions (National Research Council, 1999). Many questions remain to be answered. What treatment modalities are

effective, for which group of people, in what combination, by which practitioners, for what length of time, in which setting and at what cost? Despite the paucity of answers, we believe, and this documents reflects, that Nathan (1998) was correct when he noted that we will not return to the pre-guideline era and "...efforts are best spent on establishing as firmly as possible the empirical base for psychosocial practice guidelines" (p. 290). Despite Nathan's view that practice guidelines are not yet ideal, many clinicians and health care organizations are requiring their programs to use guiding principles for practice. During a think tank meeting held during 2000, representatives from programs that were state-funded to deliver gambling-related treatment gathered in Boston. At this meeting, there was agreement on the need for practice guidelines despite the youthful nature of the field (Massachusetts Council on Compulsive Gambling, The Massachusetts Department of Public Health, & The Division on Addictions at Harvard Medical School, 2001). Consequently, it is likely that practice guidelines are here to stay, even if they are not mature or well-developed.

Even in very basic areas of practice, guidelines can serve a useful purpose. For example, most clinicians working in the addictions do not have access to weekly clinical supervision or in-service training (Hall, Amodeo, Shaffer, & Vander Bilt, 2000; Hall, Shaffer, & Vander Bilt, 1997; Vander Bilt, Hall, Shaffer, & Higgins-Biddle, 1997; Vander Bilt, Hall, Shaffer, Storti, & Church, 1997a, 1997b); practice guidelines can suggest that supervision and training are regular aspects of clinical settings. We agree with Nathan that it is unlikely that we will return to the pre-guideline era. Consequently, it seems to make sense to begin the process of developing guidelines with a conservative and critical perspective on practice, recognizing that today's truths can become tomorrow's myths.

Given the increasing demand for treatment guidelines, but keeping Nathan's caveat in mind, we offer these practice guidelines only as a starting point, based upon the current state of empirical knowledge and clinical experience in the gambling treatment field. As noted previously, these guidelines rest upon:

Research on gambling treatment efficacy, effectiveness, efficiency and impact[16];
Advice of recognized experts in gambling treatment that have influenced the usual and customary standards of practice;
Evidence-based practices (EBP) from related domains of substance abuse and mental disorders.

Finally, despite our intention to support the following guidelines with the best available, though evolving, body of evidence, there is a lure to consider this work as the "best" practice guidelines—as if the current evidence provided enduring insight into what is best for clinical practice. The field of science in general (e.g., Casti, 1989; Cohen, 1985; Kuhn, 1970) and health care for addictive disorders in particular is filled with a history of surprising twists and turns (e.g., Gambino & Shaffer, 1979; Havens, 1982; Levine, 1978; Shaffer, 1986b, 1991; Shaffer & Gambino, 1979; Shaffer & Robbins, 1991). Therefore, rather than smugly assume that we have arrived at our destination for guiding treatment, like Nathan, we believe that it is premature to consider these guidelines as ***best*** practices. Consequently, the following guidelines represent a current starting point for a developmental process that likely will evolve for many years to come.

Guiding Principles for Clinical Interventions

"The general approach to addiction treatment can be described as breaking a big task into manageable bits, each tailored to the needs of the individual patient. Because of addiction's complexity and pervasive consequences, treatments typically involve many components. Effective treatments must attend to the multiple

[16] Efficacy answers the question "can it work?" Treatment efficacy refers to the net positive effects and duration of treatment. Effectiveness answers the question "Does it work with individuals in clinical settings?" Efficiency examines the economic questions of unit cost of intervention and cost effectiveness. Impact addresses the public health matter of which intervention has the more significant outcome on a disorder in a defined population or community. Treatment impact is a function of efficacy and patient participation numbers.

needs of the individual…" (Leshner, 1999, p.1315). While this general statement is straightforward, fulfilling this goal is more complex. For example, Leshner suggests that there are core activities that are integral to comprehensive addiction treatment. In addition to the non-specific factors described briefly at the beginning of this article, Table 35 below describes the clinical care components that might be provided during the course of treatment.

Table 35: Components of Comprehensive Addiction Treatment*

Core Elements
Intake processing and/or assessment
Treatment plan
Pharmacotherapy
Behavioral therapy and counseling
Substance use monitoring
Self-help and peer support groups
Clinical and case management
Continuing care
Associated Services
Mental health services
Medical services
Educational services
Acquired Immunodeficiency Syndrome (AIDS) & human immunodeficiency virus (HIV) services
Legal services
Financial services
Housing and/or transportation services
Family services
Child care services
Vocational services

*Derived from Leshner (1999) and modified from Etheridge RM, Hubbard RL. Conceptualizing and assessing treatment structure and process in community-based drug treatment programs. *Substance Use Misuse*, in press.

In addition to the core activities of addiction treatment, there are fundamental principles that guide clinical work. For example, the National Institute on Drug Abuse (NIDA) published an important and widely distributed document entitled *Principles of Drug Addiction Treatment: A Research-Based Guide* (National Institute on Drug Abuse, 1999). This document outlines 13 principles of effective treatment for drug addiction (see attachments). Several of these NIDA principles have direct relevance for the treatment of gambling problems. These include:

- Treatment needs to be readily available
- An individual's treatment plan must be assessed continually and modified as necessary to ensure that the plan meets the person's changing need
- Addicted or drug-abusing individuals with coexisting mental disorders should have both disorders treated in an integrated way

In the following discussion, we will consider six primary principles to guide clinical interventions in the gambling field.

RESPONSIBILITY: Individuals are encouraged to accept personal responsibility for their choices and actions appropriate to their level of impairment and stage of recovery. Professional efforts focus on seeking solutions to problems that have arisen. A therapeutic partnership between the individual and clinician that fosters shared responsibility is encouraged.

HARM REDUCTION: These interventions are directed towards minimizing or decreasing the adverse health, social, and economic consequences of gambling behavior on individuals, their family, and their community (Single et al., 1996). Harm reduction efforts target individuals with mild, moderate and severe problems. Treatment goals include, but are not limited to the moderation of the gambling behavior. Harm reduction recognizes the perspective that total abstinence from gambling is not the only therapeutic option (Marlatt, 1998).

PREVENTION: Preventive programs and services are can target a variety of levels (U.S. Preventive Services Task Force, 1996). Professional awareness and early identification of gambling problems in a range of clinical and community settings broadens the base of treatment. Primary

prevention efforts enhance both professional and public awareness; primary prevention efforts focus on people not experiencing gambling-related health problems. Secondary prevention strategies focus on screening people for gambling problems and offering assistance, including referral to specialized resources, in order to minimize these problems. Tertiary prevention refers to measures undertaken during gambling treatment (e.g., mental health, financial and family services) to prevent complications arising from the disorder.

STAGES OF CHANGE: Quinn (1891) and Custer (e.g., Custer, 1981; Custer, 1982) were early proponents of a stage change approach to understanding the emergence of gambling problems. More recently, stage change has emerged as a ubiquitous transtheoretical model for understanding behavior change and recovery from a variety of addictive disorders (Marlatt, Baer, Donovan, & Kivlahan, 1988; Miller & Rollnick, 1991; Prochaska, 1992; Prochaska, Norcross, & DiClemente, 1994; Rollnick & Morgan, 1995; Shaffer, 1992, 1997; Shaffer & Robbins, 1995). Stage change strategies that have been utilized in smoking and substance abuse treatment can be adapted to the gambling field. This approach to treatment conceptualizes different stages through which individuals progress to initiate and sustain new health behaviors (Prochaska, 1992; Prochaska et al., 1994; Shaffer, 1997; Shaffer & Robbins, 1995). Once an individual's stage of change has been identified, then appropriate intervention strategies for that stage can be implemented (e.g., Prochaska et al., 1994; Shaffer & Robbins, 1995).

TREATMENT MATCHING[17]: Clients have a range of problems, preferences, expectations and recovery needs that should be taken into consideration in deciding the most appropriate treatment plan. Individuals can be matched to stage of change, problem severity and associated comorbidity. At the same time, it must be acknowledged that treatment choices are ultimately guided by the availability of resources within the community and the accessibility to the individual.

INFORMED AND SHARED DECISION-MAKING: One of the major challenges for clinicians in the gambling field is negotiating common ground regarding clinical management issues. It requires engaging the treatment seeking person in the complex process of treatment planning. We believe that finding common ground is the crux of client-centered care. The clinician's challenge is to offer the best evidence for treatment benefit so that clients can utilize it to make their decisions. This paradigm requires that the treating professional accepts the client as an equal partner in the treatment process and respects the experiences and preferences of every patient (e.g., Hubble et al., 1999; Taber, 1985; Weston, 2001).

These six broad principles serve as the strategic landscape against which the tactics of treatment are juxtaposed. These tactics reflect treat-

[17] To date, there is a shortage of empirical research suggesting the extent to which treatment matching actually works. For example, in a comprehensive comparison of interventions in the alcohol field, project MATCH found that all three interventions (i.e., motivational counseling, cognitive behavioral therapy, and twelve step facilitation) yielded similar outcomes (Project Match Research Group, 1997). However, psychiatric severity was associated with treatment outcome; those with more severe disorders had poorer outcomes than those who were healthier at the outset of treatment. Since comorbidity is a commonly observed circumstance among gambling treatment seekers presenting for treatment (Crockford & el-Guebaly, 1998b; National Research Council, 1999; Shaffer & Korn, 2002), we suggest that it is essential to treatment planning considerations. Perhaps, the empirical evidence is weak simply because tactically we have not yet learned how to do this matching with sufficient precision.

ment objectives and conceptual models that guide our understanding of the etiology, maintenance and resolution of addiction in general and gambling disorders in particular.

Treatment Objectives

Health recovery is usually the stated primary goal for individuals seeking help for gambling problems. The World Health Organization (World Health Organization, 1984, 1986) defines health as the extent to which an individual is able, on the one hand, to change and cope with their environment and, on the other hand, to satisfy needs and realize aspirations.

For disordered gamblers this goal means ceasing or reducing gambling. The specific intent of treatment interventions is fourfold:

Minimize the harmful consequences of gambling to the gambler and others (e.g., family, friends, colleagues);
Avoid or reduce the risks associated with gambling environments (e.g., opportunities, associates and venues);
Cope effectively with negative mental states (e.g., anxiety, depression, loneliness, stress) through new strategies and life skills; and
Satisfy needs for entertainment, social connectedness and excitement through less destructive and more balanced leisure activities.

Concepts that Shape Treatment Interventions

A variety of conceptual perspectives shape the strategies and tactics of gambling treatment. These models provide the foundation against which clinicians judge the efficacy and impact of clinical practice. The following discussion will consider five commonly held perspectives that influence the treatment process.

Public Health Model: A Framework for the Spectrum of Gambling Behavior

People's gambling behavior can range from none to a great deal and observers can characterize this activity as ranging from healthy to unhealthy. At many points along this continuum, people can experience problems associated with their gambling, though these difficulties tend to emerge more among frequent gamblers who wager at higher levels and for longer periods of time. Figure 11 reflects the s*pectrum of gambling behavior* and illustrates a gambling problem continuum (Figure 11 is derived from, Korn & Shaffer, 1999b; Shaffer & Korn, 2002). The point of demarcation between mild, moderate and severe problems is not precise and reflects cultural variation and individual attributes. In addition, this figure shows where the range of prevention, harm reduction and treatment interventions reside on the spectrum. By understanding the full range of gambling and its potential consequences, health professionals can develop and implement treatment systems that can optimize resource utilization and clinical care.

Gambling Addiction

While there are a variety of perspectives on intemperate gambling, the consideration of excessive gambling as an addictive disorder has a long history and considerable following (Korn & Shaffer, 1999b). An addiction perspective considers gambling disorders as characterized by a continuous or periodic feeling of loss of control over gambling, preoccupation with gambling and money with which to gamble, irrational thinking about odds and winning, and continuation of gambling despite adverse consequences to self, family, and work.[18]

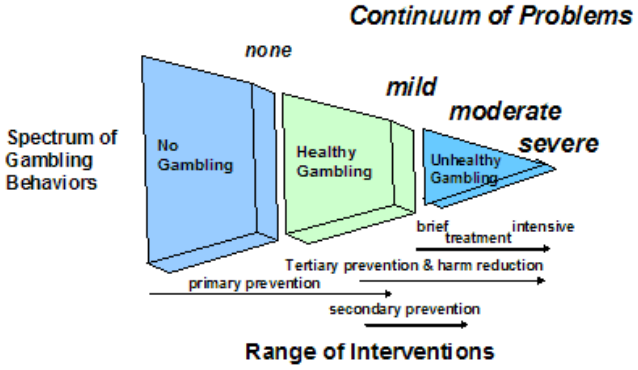


Figure 11 Public Health Framework for Gambling and Gambling-related Disorders

[18] This definition is a modification derived from the policy document of the Canadian Centre on Substance Abuse (Topp et al., 1998).

Pathways into Disordered Gambling

The determinants of disordered gambling reflect a complex interaction among the biological, behavioral and psychological profile of the individual, the characteristics of the games themselves, as well as the gambling setting and local environment (Korn & Shaffer, 1999b). *Money or something of value is the vehicle that transforms gaming into gambling*. People can develop gambling problems through a variety of pathways. These trajectories are influenced by genetic predisposition, maladaptive coping strategies to unpleasant thoughts, feelings or events, psychiatric comorbidity (e.g., associated with depression, substance abuse or other mental disorders), education, and financial status. Social environmental factors such as family, community, and cultural beliefs, values and attitudes also can influence peoples' relationship to gambling and affect their risk of developing gambling problems (Blaszczynski, 2000; National Research Council, 1999; Shaffer & Korn, 2002).

Natural History of Pathological Gambling

Pathological gamblers have been described as moving through a linear sequence of phases as the gambling behavior becomes increasingly problematic over time (Custer, 1982; Quinn, 1891). This view suggests that disordered gamblers initially experience a winning or positive consequences phase that reinforces gambling involvement. This experience is followed by the statistical inevitability of a losing phase. Prolonged losing yields a phase of desperation and hopelessness. Recent empirical and prospective research suggests that patterns of gambling are more dynamic than previously thought: there is considerable movement across the categories of pathological, problem, and non-problematic gambler even among those with full access and exposure to gambling (e.g., Shaffer & Hall, in press).

Framework for Selecting Clinical Interventions

Choosing a treatment strategy can be a complex task. When clinicians select the level and type of treatment for an individual, they should make this decision within the context of a broad public health framework. This paradigm offers an array of treatment options by integrating the notion of healthy and unhealthy gambling behavior, a problem severity continuum reflecting mild, moderate and severe problems, as well as a range of prevention, harm reduction and treatment strategies (Korn & Shaffer, 1999b; Shaffer & Korn, 2002). For example, healthy gambling represents informed choice on the probability of winning, a pleasurable gambling experience in low risk situations and wagering in sensible amounts. Healthy gambling sustains or enhances a gambler's state of well-being. Along with non-gamblers, healthy gamblers are a target group for primary prevention. Conversely, unhealthy gambling refers to the various levels of gambling problems experienced by some gamblers resulting in adverse consequences. The latter group of unhealthy gamblers benefits from brief or intensive treatment, secondary and tertiary prevention as well as harm reduction interventions.

Assessment of Pathological Gambling and Related Disorders

The following section will discuss the process of assessment and the tools often used for screening and diagnosing gambling disorders. In addition, this section of the guidelines will consider four related components that are central to the assessment process. These include an evaluation of 1) a person's readiness to change, 2) co-occurring mental health and substance use disorder(s), 3) severity of gambling problems, and 4) suicidality. Finally, we will examine the nature of treatment planning within the context of assessment.

Assessment, Diagnosis and Treatment: General Considerations[19]

Treatment for a gambling disorder begins at first contact with a clinician. Assessment is the critical and complex initial step in the process and involves both the art and science of clinical practice. Assessment has a number of components and is an ongoing and dynamic element in the treatment process (Shaffer & Freed, in press). Although it is seemingly straightforward, assessment reflects a complex set of multidimensional activities that both drives the formulation phase of treatment and informs the entire treatment process. The assessment process provides a foundation for developing an alliance with the individual, an understanding of the gambling problem and the person, a blueprint for treatment planning, and a reference point for treatment monitoring and continuing care. Assessment is a broad concept that represents screening, evaluation and diagnostic activities.

Conceptually, one important issue for clinicians to consider is whether they are assessing problems or people (Shaffer, 1986a). For example, is the evaluative task to identify excessive gambling patterns and the consequences of these activities or is it to understand the nature and dynamics of the excessive gambler? As one moves from screening to problem assessment to personal assessment, the extent of information developed is greater but the costs of assessment also increase. Performing a sequential assessment ensures that further information is actually necessary to the treatment process and its outcome goals and justifies the increased cost and time (Institute of Medicine, 1990, p. 250).

In the case of disordered gambling, a clinical assessment process explores the history of gambling behavior including current gambling activity; the impact of gambling on individual, interpersonal and social functioning; educational background; financial circumstances; individuals' readiness to change; their mental and physical health status including risk of suicide; past and present mental disorders including addiction, medication and substance use patterns as well as their relevant family history and social environment. Information can be gathered through a variety of formal and informal methods including free form interviews, structured interviews and screening tools (e.g., Shaffer & Freed, in press; Taber, 1985).

[19] See Special Notes on Taking Drug & Gambling Histories.

Screening

Screening is a form of secondary prevention that identifies individuals with mild to moderate gambling problems. It represents a self or other analysis of gambling patterns to identify gambling problems. Screening typically involves responding to a series of brief, often self-administered, questions for people not in gambling treatment to determine if they might have the disorder. By screening groups of asymptomatic people in the community or health care settings, health care professional try to identify the problem or disorder so that early intervention is possible. In health care settings, routine gambling screening of all patients/clients (i.e., case finding) provides an efficient opportunity to identify individuals for further evaluation and a consideration of options. Typically, in an optimal clinical system, once someone has screened positive for a gambling-related problem, the screener refers the person to a gambling clinician for more extensive evaluation. Ultimately, people can address their circumstance through self-help, professional assistance, a combination of these or other resources.

There are a variety of clinical tools available to mental health and substance abuse treatment providers that identify gambling-related problems. New assessment instruments for gambling disorders are appearing regularly. The most common clinical screening instrument is the South Oaks Gambling Screen (SOGS) for adults introduced in 1987 for use with clinical populations (Lesieur & Blume, 1987). The SOGS is based upon the DSM-III-R. The Massachusetts Gambling Screen (MAGS) is the first instrument introduced that was based wholly on DSM-IV criteria (Shaffer, LaBrie, Scanlan, & Cummings, 1994). Further, this is the first instrument to introduce weighted items to gambling assessment; that is the MAGS recognizes that some symptoms are more important than others. Con-

sequently, the MAGS is responsive to growing criticisms of the DSM-IV (Beutler & Malik, 2002). It includes a short and long form: the short form (i.e., MAGS 7) was validated on a sample of adolescents. These screening devices have demonstrated reliability[20] and validity; in addition, these screens are readily interpretable. However, each of these instruments is valid only within certain parameters. In addition, Gamblers Anonymous has available a self-assessment questionnaire (GA 20) based on 12 step principles and practices (Gamblers Anonymous, 2001). However, it has not been well validated nor widely used in clinical settings.

There are many new instruments that have been used for general population screening; in 1997, 27 different screening instruments had been identified (Shaffer et al., 1997a). More are in the development stages. However, most of these instruments have not been subject to peer review and their psychometric characteristics remain uncertain. One of the most promising of the new instruments for identifying gambling and comorbid psychiatric disorders is the Composite International Diagnostic Interview (CIDI) (Kessler, 2000); this measure is endorsed by the World Health Organization and is now part of a United States national comorbidity survey.

Pathological gambling can coexist with substance abuse, mental illness and other addictive disorders, although these relationships and the pathogenesis are incompletely understood. Nevertheless, it is prudent for clinicians to consider and screen for other mental disorders such as alcohol and drug problems, mood, anxiety and stress disorders as well as suicide risk. A referral to an appropriate mental health specialist for in-depth clinical assessment of a possible comorbid condition may be required.

[20] The MAGS was designed to evidence lower Chronbach's alpha than most other scales since its short form requires that each question efficiently burden independent evaluative dimensions; longer scales inherently evidence higher internal consistency since multiple questions measure the same underlying dimensions.

Diagnosing Pathological Gambling

In 1980, the American Psychiatric Association incorporated "pathological gambling" into its diagnostic and statistical manual (American Psychiatric Association, 1980). This development legitimated disordered gambling as a psychiatric illness within the mainstream mental health field. DSM-IV requires 5 of 10 criteria to be satisfied for clinicians to make a diagnosis of pathological gambling (American Psychiatric Association, 1994). In addition to making a diagnosis of pathological gambling, DSM-IV requires that the presence of a manic condition not provide a better explanation of the gambling behavior. Table 36 below summarizes these 10 diagnostic criteria. The DSM-IV emphasizes impaired ability to control gambling-related behaviors, adverse social consequences of gambling, as well as tolerance and withdrawal.

Table 36: Diagnostic Criteria for Pathological Gambling

A. Persistent and recurrent maladaptive gambling behavior as indicated by five (or more) of the following:

(1) is preoccupied with gambling (e.g., is preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble)

(2) needs to gamble with increasing amounts of money in order to achieve the desired excitement

(3) has repeated unsuccessful efforts to control, cut back, or stop gambling

(4) is restless or irritable when attempting to cut down or stop gambling

(5) gambles as a way of escaping from problems or of relieving a dysphonic mood (e.g., feelings of helplessness, guilt, anxiety, depression)

(6) after losing money gambling, often returns another day to get even ("chasing" one's losses)

(7) lies to family members, therapists, or others to conceal the extent of involvement with gambling

(8) has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling

(9) has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling

(10) relies on others to provide money to relieve a desperate financial situation caused by gambling

B. The gambling behavior is not better accounted for by a Manic Episode.

Although the Diagnostic and Statistical Manual (DSM-IV) includes pathological gambling, it does provide an unusual *cautionary statement*. This statement notes that "...inclusion here, for clinical and research purposes, of a diagnostic category such as Pathological Gambling or Pedophilia does not imply that the condition meets legal or other non-medical criteria for what constitutes mental disease, mental disorder, or mental disability. The clinical and scientific considerations involved in categorization of these conditions as mental disorders may not be wholly relevant to legal judgments, for example, that take into account such issues as individual responsibility, disability determination, and competency" (American Psychiatric Association, 1994, p. xxvii). This statement is confusing. Although this perspective implies that this diagnosis might not be wholly relevant to certain judgments, the use of "wholly" also suggests that it might be partly relevant. This perspective of the American Psychiatric Association raises a number of conceptual, ethical and professional issues but nonetheless is important to acknowledge.

Assessing Motivation and Readiness for Change

Motivational assessment gives the clinician conceptual and practical tools to identify the person's *readiness for change* (e.g., not ready, unsure or ready). It also can be used to determine and score individuals' perception as to the *importance of changing* and their *confidence in their ability* (i.e., self-efficacy) to initiate and carry out the challenge (Prochaska, 1996; Prochaska, 1992; Prochaska et al., 1994; Shaffer, 1997; Shaffer & Robbins, 1995; Shaffer & Simoneau, 2001; Skinner, 2001). However, it should be noted that the majority of research on readiness to change has been carried out in the tobacco and alcohol fields; consequently, there is considerable need for more gambling-specific research with longitudinal follow-up.

Assessing the Severity of Disordered Gambling

To reflect the underlying continuum of gambling problem behavior, Shaffer and Hall have suggested a universal system for clinicians to assess problem severity beyond a simple dichotomy (Shaffer & Hall, 1996). In addition to avoiding pejorative and often misleading language, this system also is consistent with a public health perspective on population prevalence and resource allocation. In this system, level 0 represents the prevalence of non-gamblers; level 1 represents respondents who do not report any gambling-related symptoms (i.e., not experiencing any gambling problems). Level 2 represents respondents who are experiencing sub-clinical levels of gambling problems and level 3 represents respondents who meet diagnostic criteria for having a gambling disorder. It is important to note that level 2 gamblers can move in two directions: they can progress to a more disordered state (i.e., level 3), or they can move to a less disordered state (i.e., level 1). New research suggests that these gamblers progress to level 3 less than expected and move toward level 1 more than the conventional wisdom would predict (Shaffer & Hall, in press).

Formulating a Treatment Plan

Treatment plan development should be a joint undertaking between the client and clinician. The treatment plan reflects their shared understanding of the nature of the problem, the desired outcomes and the preferred interventions. Since clients are heterogeneous in a number of clinically significant ways, treatment plans should differ according to the client's goals, psychobiology and social context. Because expectancy is an important predictor of successful outcome, clinical interventions should be congruent with the client's informed beliefs about the likely effectiveness of treatment (e.g., Frank, 1961; Havens, 1982; Havens, 1989; Hubble et al., 1999; Menninger, 1963; Miller, 2000; Rollnick & Morgan, 1995; Shaffer & Robbins, 1991; Silver & Shaffer, 1996; Walitzer, Dermen, & Connors, 1999; Weiner, 1975). Ultimately, treatment plans must address the goal and specific objectives of treatment, the psychological interventions and particular modalities, medications where appropriate, other supportive strategies, length of treatment, setting and cost.

Treatment Modalities & Settings

Caring for a Syndrome

Gambling disorders have both unique and shared elements (Shaffer & Korn, 2002). For example, pathological gambling has unique elements (e.g., betting increasing amounts of money); it also shares signs and symptoms with other disorders (e.g., anxiety, depression, impulsivity, substance abuse). Consequently, pathological gambling is best thought of as a syndrome. Since syndromes are multidimensional, these disorders typically do not respond favorably to a single treatment modality. From this perspective, the most effective treatments for gambling problems reflect a multimodal approach that rests upon patient-treatment matching. Multidimensional treatments include various combinations of psychotherapy, psychopharmacology, financial, educational and self-help interventions. These various treatment elements within a continuum of care model are both additive and interactive, a circumstance necessary to deal with the multifaceted nature of gambling disorders.

Treatment settings include primary care, residential (e.g., hospital and non-hospital), day programs and outpatient treatment (i.e., hospital and non-hospital) as well as community counseling clinics. These settings most often are associated with mental health and addiction services. The variety of settings provides an array of service modalities that vary in cost, professional expertise, therapeutic resources, and treatment philosophy. Not all settings offer all treatment modalities. For example, primary care settings tend to offer broad contact for screening, early identification, brief treatment and referral. Alternatively, residential or comprehensive day treatment settings often provide multimodal programming. Severely disordered gamblers might initially require in-patient care for psychiatric stabilization and safety during periods of initiating cessation from their gambling activities. Outpatient settings, (e.g., community mental health, social service and addiction treatment clinics) are the most accessible but might have limited options, relying on careful selection of appropriate counseling interventions. Further, outpatient settings often require linkages with other community resources. Because of the complex relationship between clinical setting and modality, treatment planning requires careful matching of these care components.[21]

Counseling Interventions

Counseling for individuals with gambling problems is the most common clinician intervention. The widespread use of counseling in the addictions suggests that it is central to achieving the goal of health recovery. In the mental health and addiction field, there is a spectrum of psychological interventions potentially available in an individual, family or group format. Based on the clinical research literature, we will highlight empirically supported psychotherapeutic treatments for disordered gambling; in addition, we will describe interventions that derive from relevant addiction and mental health research.

As we described before in the section on gathering evidence, the research criteria for including evidence in this guide were derived generally from the model developed by The Cochrane Library, which addresses four methodological areas: 1) types of studies, 2) participant profile and numbers, 3) interventions utilized, and 4) outcome measurements (Oakey-Browne, Adams, & Mobberley, 2001).

Strength of Evidence

To help evaluate the efficacy of specific counseling modalities, techniques and strategies, the following discussion classifies counseling approaches by the strength of the scientific evidence that is available to support the use of these methods (Chambless & Ollendick, 2001). Although randomized clinical trials have long represented the "gold standard" of treatment outcome studies and the strongest form of evidence regarding the efficacy of treatment, in the field of gambling studies, randomized clinical trials are few. In addition, the existing randomized clinical trials have limited their focus to cognitive and behavioral therapies; further, these studies have tended to include small samples. Finally, the absence of a randomized clinical trial

[21] See Criteria for Patient Placement, Adapted from Giulliani and Schnoll (1985).

does not mean that other treatment approaches have little or no utility. Rather, this evidence simply is the best available research supporting these methods. Given the nascent state of gambling research, currently, the shortage of clinical trials usually suggests that investigators simply have not yet studied most available clinical methods.

There are a variety of ways to classify evidence (Chambless & Ollendick, 2001). This document organizes the evidence into three general categories: strong, moderate and weak. ***Strong evidence*** reflects the availability of randomized clinical trials, typically with 6 to 12 month follow-up period, clear outcome measures and adequate sample sizes. ***Moderate evidence*** represents interventions and treatment protocols that are fully documented and tested within a strong research design that includes a control group, adequate subject follow-up and carefully measured treatment outcomes. ***Weak evidence*** reflects the absence of studies or studies with poor designs, weak methods, small samples, the absence of control or comparison groups, and inadequate periods of follow-up. Unpublished reports, manuscripts of clinical efficacy that have not been subject to peer review, conference presentations and proceedings are considered weak evidence. In addition, controversial techniques reflecting questionable ethics have been classified as having weak evidence to support their use—not necessarily because empirical treatment efficacy is absent, but instead simply because the clinical methods are questionable on ethical grounds. Using this sorting system, Table 37 summarizes counseling and self-help intervention methods by the nature and extent of the available evidence.[22] With respect to the strong evidence category, the Cochrane Library review (Oakey-Browne, Adams, & M., 2001) noted that until the year 2000, they identified only seventeen gambling outcome studies, and merely four were randomized clinical trials (Echeburua, Baez, & Fernandez-Montalvo, 1996; McConaghy, Armstrong, Blaszczynski, & Allcock, 1988; McConaghy, Blaszczynski, & Frankova, 1991; Sylvain, Ladouceur, & Boisvert, 1997).

Table 37: Classifying the Evidence

Strength of Evidence	Interventions
Strong Evidence	Cognitive Behavioral Therapy Behavioral Therapy
Moderate Evidence	Relapse Prevention
Weak Evidence	Psychodynamic Psychotherapy Aversion Therapy 12-step (e.g., Gamblers Anonymous; self-help) Self-Exclusion (self-help)

Promising Interventions and Complementary Services

Before examining each of the interventions described in the table above, it is useful to consider the promise evidenced by empirically supported interventions from related mental health and addiction fields (Chambless & Ollendick, 2001) that have been widely transported to gambling treatment. These applications appear theoretically attractive and are widely used by the gambling treatment practitioners. Although they show great potential to the gambling field, to date, this adaptation phenomenon has occurred without research into their efficacy and effectiveness for disordered gamblers. Brief therapy, strategies to enhance motivation, stage change matching and twelve-step facilitation are promising interventions included in this document and the following discussion because these four methods have significant implications for future research and represent promising applications to gambling practice. In addition, financial counseling and the use of leisure programs serve as complementary treatment strategies that hold promise for the treatment of gambling disorders.

[22] Readers should note that weak evidence does not mean that the existing evidence fails to support the efficacy of these interventions; rather, it most likely indicates that there is little evidence available.

Interventions: Strong Evidence

Cognitive Behavior Therapy and Related Techniques

Cognitive Behavioral Therapy (CBT) is based on the principles of social learning theory (Bandura, 1986; Bujod, LaDouceur, Sylvain, & Boisvert, 1994; Ladouceur et al., 2002; Ladouceur et al., 1998; Ladouceur & Walker, 1998; Sylvain et al., 1997). This type of psychotherapy attempts to change the thoughts and behaviors that are fundamental to maintaining a disorder. Disordered gambling is a highly cognitive condition. Despite the need for additional treatments and the likelihood that these will emerge, based upon current empirical evidence, CBT is the primary psychotherapeutic modality for the treatment of disordered gambling; currently, it also is the most broadly utilized primary counseling modality that is supported by randomized controlled clinical trials demonstrating efficacy and improved clinical outcomes (Bujod et al., 1994; Sylvain et al., 1997). Despite the strength of evidence that is available to support the use of CBT, it is important for readers to note that this research often has limited subjects that complete the course of treatment (Montori & Guyatt, 2001).

The goal of CBT for gambling is to ***identify and change "cognitive distortions and errors" that are associated with intemperate gambling and its adverse sequelae.*** For example, beliefs in an eventual big win, being unrealistically lucky, superstitious behavior, as well as selective and distorted memory are characteristics of cognitive distortions that often are associated with disordered gambling (e.g., Ladouceur et al., 2002; Ladouceur & Walker, 1998). Perceptions of self include how money links to self-esteem, social status and power. ***The "illusion of control" over gambling outcomes is a core cognition that influences disordered gamblers.*** This sense that ***one has the "omnipotent skill" necessary to beat the odds*** is an enduring characteristic of pathological gamblers. Finally, CBT attends to the effect of gambling on others and attempts to minimize the negative impact on family, work and personal finance.

Ladouceur and colleagues at Laval University in Quebec (Bujod et al., 1994; Ladouceur et al., 2002; Ladouceur et al., 1998; Ladouceur & Walker, 1998; Sylvain et al., 1997) have developed a treatment program model based on cognitive behavioral principles that includes four components: (a) correcting cognitive distortions about gambling; (b) developing problem solving skills; (c) teaching social skills; and (d) teaching relapse prevention. These key CBT techniques central to gamblers are outlined below.

Cognitive Restructuring

Cognitive restructuring for gambling disorders reflects interventions that are directed toward changing unhealthy gambling behavior by correcting distorted thoughts, beliefs and attitudes about playing and winning games of chance. It begins by enhancing gamblers' awareness of specific gambling thought distortions and errors in judgment so that they can begin to make better decisions and choices. This goal can be achieved by thoroughly reviewing a person's gambling experiences, strategies and expectations as well as by monitoring their current gambling behavior. This will provide clinicians with the opportunity to describe, assess and evaluate a gambler's cognitive pattern of activities. For example, one of the commonly observed distortions among disordered gamblers is known as the "Gambler's Fallacy." This cognitive distortion represents a gambler's belief that they can predict future randomly determined gambling outcomes based on their observations and analysis of past random gambling events.

By examining the specific gambling thought processes that support distorted ideas, beliefs, reasoning and decisions and then correcting and reframing them, clinicians can effect change in disordered gambling behavior. Cognitive restructuring interventions correct distortions in thinking regarding numeracy, games played, betting systems, superstition, selective memory, attribution and causality.

For example, through a process of hypothesis testing the problem gambler in treatment can validate their predictions in a variety of gambling simulated or actual scenarios that test mathematical and logical thinking. Subse-

quently, they can evaluate their outcome predictions of coin tosses, picking lottery numbers, as well as slot and electronic gaming machines patterns. The new learning focuses on understanding and applying concepts of randomness, probability, luck and skill to gambling situations and decisions.

We encourage interested readers to review the following resources for additional information for a more detailed description of cognitive problems, treatments and restructuring strategies (Ladouceur, Paquet, & Dube, 1996; Ladouceur et al., 2002; Ladouceur et al., 1998; Ladouceur & Walker, 1998).

Problem Solving Training

The development of problem solving skills can assist individuals struggling against their impulses to gamble excessively to feel improved control over their gambling risks and consequences. Problem solving strategies address therapeutic themes that include dealing with gambling urges, deciding about limits on the time and money spent gambling, resolving difficulties with family members and finding suitable solutions to gambling debts.

The problem solving process involves a number of steps: identifying the problem accurately, collecting specific information about the problem, generating different options, exploring consequences by listing advantages and disadvantages for each, and then implementing and evaluating the preferred solution (e.g., Goldfried & Davison, 1976).

Social and Coping Skills Training

There is a range of social and life skills that can benefit a gambler in recovery. These include communication, assertiveness, numeracy skills, refusal skills, as well as the self-management of stress, anger, and anxiety. Therapeutic life skills training also includes relaxation, physical activity and meditation. CBT tactics applied to disordered gamblers often incorporate **role play** (e.g., practicing refusal skills), **imaging** (e.g., anticipating an effective coping sequence, re-experiencing a disastrous gambling event and creating a more acceptable outcome), **goal setting** (e.g., deciding limits on gambling occasions, time & amount of money spent), **psychoeducation** (e.g., learning the signs and symptoms of problem and pathological gambling), **impulse management** (e.g., controlling urges to gamble), and **self-monitoring** (e.g., money and time spent gambling).

A detailed discussion of this broad area is beyond the scope of these guidelines. Interested practitioners are encouraged to examine relevant materials from the alcohol field (e.g., Project MATCH manual) and the cocaine literature (e.g., NIDA's cognitive behavioral manual for cocaine addiction) as a basis for exploring specific topic areas and selected exercises (Monti, Abrams, Kadden, & Cooney, 1989; National Institute of Drug Abuse, 1998; National Instituted on Alcohol Abuse and Alcoholism, 1995).

Behavioral Therapy

A variety of behavioral therapeutic approaches have been applied to problem and pathological gamblers. These methods include: 1) aversion (e.g., Barker & Miller, 1968; Koller, 1972; Seager, 1970), 2) individual stimulus control and cue exposure with response prevention (Echeburua et al., 1996), 3) systematic imaginal desensitization strategies incorporating both imaginal relaxation (IR) and imaginal desensitization (ID) techniques (McConaghy, Armstrong, Blaszczynski, & Allcock, 1983; McConaghy et al., 1988; McConaghy et al., 1991), as well as 4) self-exclusion or avoidance strategies (Ladouceur, Jacques, Giroux, Ferland, & Lebond, 2000).

Imaginal Desensitization Technique

Imaginal techniques are used as a desensitization tactic. These treatment tactics derive from a behavioral completion approach that has been found to decrease gambling urges and behaviors (McConaghy et al., 1983; McConaghy et al., 1988; McConaghy et al., 1991). Systemic imaginal desensitization (ID) is a useful method to reduce or eliminate the compelling urge to gamble. After the induction of relaxation, it involves exposure to specific gambling cues or triggers and subsequent response prevention (McConaghy et al., 1988). This treatment strategy incorporates both imaginal and other relaxa-

tion-based techniques. Research incorporating a randomized clinical trial design has demonstrated significant and favorable differences between desensitization techniques and other behavioral procedures as evidenced by decreased anxiety and gambling behavior (McConaghy et al., 1991). Although there are variations, the desensitization technique involves learning a progressive muscle relaxation procedure that reduces physical tension; once relaxed, the relaxed person then imagines urges and or opportunities to gamble while maintaining the relaxed state. For a more thorough description of this approach, interested readers should see "Controlling Your Urge Using a Relaxation Technique" in *Overcoming Compulsive Gambling* (Blaszczynski, 1998). This technique is well suited for use alone or in combination with cognitive behavioral and other therapies that need to integrate stress and tension reduction techniques.

Interventions: Moderate Evidence

Relapse Prevention and Recovery Training

Relapse prevention and recovery training are modalities designed to increase a person's ability to identify and cope with **high-risk situations** that commonly create problems and precipitate relapse. The techniques have been well developed and widely used in the alcohol and drug treatment field (Annis, 1986; Marlatt & Gordon, 1985; McAulliffe & Ch'ien, 1986). More recently, these strategies have been applied to gambling treatment. The gambling risk situations identified include environmental settings (e.g., casinos, lottery outlets), intrapersonal discomfort (e.g., anger, depression, boredom, stress) and interpersonal difficulties (e.g., finances, work and family). The goal is to develop coping methods to deal effectively with these specific high-risk situations without relying on unhealthy and maladaptive gambling behavior. To date, other than its incorporation into program outcome studies of Ladouceur and colleagues (e.g., Ladouceur et al., 1998) there has been a paucity of research addressing the effectiveness of relapse prevention in the gambling field.

A promising application of the relapse prevention model for gambling is in the late stage of development (e.g., Littman-Sharp, Turner, Stirpe, & Liu, 1999). The instrument, *Inventory of Gambling Situations* (IGS), builds on earlier similar tools, the Inventory of Drinking Situations (IDS) and Inventory of Drug-Taking Situations (IDTS) (Annis, 1985, 1982). The IGS identifies an individual's high-risk situations for disordered gambling behavior by assessing the areas that have been problematic during the clients' life and which might place them at risk of relapse into unhealthy gambling during their recovery.[23] By identifying potential risk situations, this instrument can be used to teach recovering gamblers new coping strategies for use during their continuing care and aftercare experiences. In addition, this instrument can be used during the early phase of treatment to enhance awareness of the role gambling plays in maladaptive coping. To date, the instrument has been validated but not published in a peer-reviewed journal.[24]

Interventions: Weak Evidence

Psychodynamic Psychotherapy

This therapeutic modality has been used widely with gambling clients prior to the dominance of cognitive-behavioral approaches. It is likely that this is still the most common form of psychotherapy with gambling as well as other addictive disorders. However, there is a paucity of psychodynamic research in the gambling field and sparse evidence in the outcome literature to support its effectiveness. The purpose of psychodynamic psychotherapy is to assist the individual to gain insight into the emotional ori-

[23] The Inventory of Gambling Situations includes eleven items: Negative Affective Situations (negative emotions, conflict with others), Temptation Situations (urges and temptations, testing personal control), Positive Affect Situations (pleasant emotions, social pressure, need for excitement), Gambling Cycle Situations (worried about debt, winning and chasing loses, confidence in skill, need to be in control).

[24] The Inventory of Gambling Situations is available on disc from the Centre for Addiction and Mental Health, 1-800-661-1111 or e-mail: marketing @camh.net

gins and meaning of their gambling behavior. It frames disordered gambling as a repetitive activity that is functional. For example, it exists to satisfy some need that typically remains unconscious or poorly understood. Although psychoanalytically oriented treatment can be lengthy, continue over several years and might be best suited for individuals with comorbid personality disorders, psychodynamically oriented treatment also offers strategies and techniques that can be used in brief treatment and supercede any particular treatment model (Bergler, 1957; Galdston, 1951; Gustafson, 1995; Khantzian, Halliday, & McAuliffe, 1990; Levin, 1987; Perry et al., 1987; Rosenthal, 1997; Rosenthal & Rugle, 1994; Weiner, 1975). Rosenthal and Rugle provide clinicians and interested readers with a comprehensive review and treatment approach for gambling problems based on psychodynamic principles (Rosenthal, 1997; Rosenthal & Rugle, 1994).

Self-Help: Gamblers Anonymous

Originally founded in 1957, Gamblers Anonymous (GA) is a commonly, but not always readily available, self-help fellowship that provides mutual support group for individuals experiencing gambling problems. GamAnon is a related fellowship for family members affected by compulsive / pathological gamblers. Like Alcoholics Anonymous and Al-anon, these gambling self-help fellowships are based on 12-Step principles. As fellowships, these programs are not treatments, though for many participants these interventions are therapeutic. Since 12-step groups like GA are not treatments, it is improper to consider these widely available, highly variable and free activities as a treatment or practice component.

Nevertheless, GA has strong roots and a well-developed conceptual strategy that guides its activities. For example, deeply rooted in this approach is the perspective that disordered gambling (e.g., pathological, problem, compulsive) is a spiritual and medical disease. The major goal of this fellowship is to garner from its members a commitment to abstinence from gambling and a lifelong commitment to the principles of GA and participation in GA meetings. There is no professional facilitation, organizational affiliations or fee. Despite its status and purpose as a fellowship, there has been a paucity of research directed to evaluating its effectiveness. Outcome studies of Gamblers Anonymous have reported first year dropout rates as high as 70 percent (Stewart & Brown, 1988) with abstinence rates of 8 percent after one year (Brown, 1985). However, many formal treatment programs and professional therapists require, or at least encourage, troubled gamblers to be involved in GA as a component of a comprehensive treatment and aftercare plan. Information on groups and meetings can be obtained through the local telephone directory or the Internet.

Aversion Therapy

Though it is used for the treatment of certain forms of depression, clinicians consider aversion therapy, using electric shock as a punishment, as an unacceptable choice of therapy for the treatment of addictive disorders; consequently, it is used rarely in contemporary settings. However, imagining distressing situations is used as an aversive device (Barker & Miller, 1968; Koller, 1972; Seager, 1970).

Self-Exclusion

An interesting policy approach to reduce and avoid disordered gambling exists in some jurisdictions. Self-exclusion programs represent a voluntary opportunity for gamblers to avoid casino or racetrack gambling by arranging their own exclusion from entering these settings for a fixed time. Under this strategy, the casino corporation assumes responsibility for implementing the program within a particular jurisdiction and for a defined period, including a lifetime. The program currently does not extend to other forms of gambling that might be problematic for the self-excluded person. This program raises a number of thorny legal issues, however, despite these legal concerns, it represents a unique type of behavioral intervention, although its long-term effectiveness as a harm reduction strategy requires more study (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000)

Interventions: Promising and Complementary Services

Promising Interventions

A number of other psychotherapeutic interventions are available for clinicians to utilize during the treatment of disordered gambling. Typically, these clinical strategies and tactics originated in addictions and mental health practice. Some of these treatments have empirical support, while others remain controversial in the absence of sufficient evidence for the treatment of gambling disorders. Consequently, the interventions presented in the following discussion were selected because these have shown varying degrees of promise in the gambling field. Nevertheless, it is important to emphasize that we believe more empirical validation must be completed before we can draw meaningful conclusions about the efficacy and impact of these procedures (e.g., Chambless & Ollendick, 2001).

Brief Therapy

Solution-focused brief therapy (SFBT) was developed for use with substance abusers and has been adapted to gambling. This treatment rests upon cognitive behavioral principles and represents a paradigm shift in clinical strategies from more medically oriented problem solving to client-centered solution building (Berg, 1995; Berg & Miller, 1992). Since research on this treatment is in its early stages, the effectiveness of this approach has not been fully demonstrated. However, cost considerations and client satisfaction make this a potentially attractive and important option (Lee, 1997).

Therapists can apply (SFBT) to both individual and family counseling. The central frame is brief treatment offered either as a single contact or a series of brief and intermittent episodes throughout the recovery process. The main tactics are creating options using a decision balance format and setting achievable goals. The decision balance exercise develops a therapeutic cost benefit analysis through an exploration of the positive and negative implications of continuing the problem behavior and comparing this outcome to the benefits and losses of adopting a new and healthier behavior. The client and practitioner cooperatively formulate and negotiate specific goals. This process emphasizes solution building, small but steady gains, and the development of a sense of control. Clinicians can view SFBT as a form of harm reduction (e.g., Brownson, Newschaffer, & Ali-Abarghoui, 1997; David A. Korn, 2000) that might be most useful for early stage problem gamblers.

Motivational Enhancement Strategies

Motivational enhancement strategies (e.g., motivational counseling, resistance reduction) are brief therapeutic strategies designed to lower resistance and enhance motivation for change. During the last decade, a variety of clinicians began to encourage treatment for substance use and other "addictive" disorders that focused on treatment matching (e.g., Brown & Miller, 1993; Miller & Rollnick, 1991; Prochaska, 1992; Prochaska et al., 1994; Shaffer & Robbins, 1991; Shaffer & Robbins, 1995; Shaffer & Simoneau, 2001). From this perspective, matching clients to the developmental stage of their addictive disorder with a particular therapeutic approach was the algorithm that has started to guide clinical practice. Knowing stages and processes of change have helped therapists evaluate where their clients were on the change continuum and allowed for targeted treatment plans (e.g., Rollnick & Morgan, 1995; Shaffer & Robbins, 1991; Shaffer & Robbins, 1995). Consequently, instead of pursuing a more distant and difficult complete resolution to the problem of addiction, clinicians began working to enhance motivation to help clients advance incrementally toward the next developmental stage of change. Motivational enhancement strategies rapidly grew in popularity, promising better clinical outcomes by stimulating, provoking or otherwise enhancing client motivation.

Motivational enhancement strategies augment pre-existing motivation by improving the therapeutic alliance. This is accomplished by recognizing that clients are, at best, ambivalent about experiencing personal change (Miller & Rollnick, 1991; Orford, 1985; Rollnick & Morgan, 1995; Shaffer, 1994, 1997). With improved therapeutic relationships, clients are more willing to consider and explore their ambivalence. Miller and Rollnick (1991) noted that ambiva-

lence is at the heart of treatment for addictive disorders. Shaffer (1992; 1994; 1997; 1995) simultaneously speculated that painful ambivalence was responsible for stimulating denial and the appearance of intractability among people struggling with addictive disorders. By attending to the dynamics of ambivalence, clinicians improve the quality of treatment by providing a therapeutic context that resonates with the client's mixed motivations. Motivational interviewing strategies presume that the level of motivation necessary for change is lacking and insufficient to stimulate and sustain change. If at all present, the motivational interviewing strategy (Miller & Rollnick, 1991) suggests that motivation to change is inadequate and has to be energized (charged), like a weak battery. If motivation to change is absent, according to enhancement strategies, clinicians need to fashion and nourish motivation during the treatment process. Consequently, treatment providers have been focusing on motivational deficiencies to improve treatment outcomes.

Focusing on clients' resistance to change is another important way for clinicians to improve the motivational status of clients who seek treatment for addictive disorders (Shaffer & Simoneau, 2001).[25] Resistance is at the core of what makes it difficult for people, even the most healthy, to achieve consistently "good" mental health (Ellis, 1987; Shaffer & Simoneau, 2001). Based upon psychodynamic principles, resistance reduction assumes that internal and external obstacles dilute or weaken existing levels of motivation for change that can *already be sufficient* to drive the change process. Resistance reduction strategies encourage therapists to validate present, apparently self-destructive, behavior as a legitimate choice by asking clients about the perceived benefits of these activities (e.g., gambling) rather than exclusively focusing on the costs (e.g., losses). Within this safe context, clients can more freely explore <u>all</u> of the costs and benefits associated with a pattern of addictive activity. Since a resistance reduction strategy does not ask clients to give up anything, patients also have less need to resist therapeutic interventions. With little need to resist treatment, previously inhibited motivation is released for clients to use in changing seemingly intractable behavior patterns.

Resistance reduction and other motivational enhancement strategies are not mutually exclusive. Clinicians should consider employing the full range of motivational enhancement approaches to advance the treatment objectives and the health of disordered gamblers. A decision balance is the major technique used in motivational enhancement strategies. At every stage of treatment, motivational strategies ask patients to address the pros and cons of their current behavior and value of staying the same or changing.

Matching Motivational Strategies to Stage of Change

Stage change concepts have emerged as an important force in the treatment of addictive behaviors (Crowley, 1999; Prochaska, 1992; Prochaska et al., 1994; Quinn, 1891; Rollnick & Morgan, 1995; Shaffer, 1992, 1994, 1997; Shaffer & Robbins, 1995). Derived originally from work with tobacco dependence, stage change thinking has evolved into a ubiquitous and transtheoretical map for the treatment of addictive behaviors. As we mentioned previously, an evaluation of a gambler's readiness to change and determination of their stage of change are important steps to formulating treatment strategy (Shaffer & Robbins, 1995). Motivational enhancement techniques can facilitate this process and guide intervention strategies. It is important to ensure that clinical interventions match appropriately to the stage of change.

Winning: Precontemplation

At this initial stage, because they are unaware of the relationship between their gambling and their problems, gamblers do not consider changing their behavior. Gambling is viewed as a positive experience; most people who have experienced only winning do not seek treatment. However, few regular gamblers only win. Statistical probability takes its toll and this stage is characterized by lack of awareness that exces-

[25] Although this article primarily focuses on addictive behaviors, the discussion and its application are not limited exclusively to the addictions. Many of the treatment strategies and techniques described in this article also will apply to other clinical problems.

sive gambling can be or is the cause of any personal problems that are evident in a person's life. The major challenge or themes of this stage are to **enhance awareness** of adverse consequences and reduce **resistance** to change (Shaffer & Simoneau, 2001). A psychoeducational strategy initiates the change process. The counselor provides information on the clinical syndrome of pathological gambling and describes the continuum of mild, moderate and severe gambling problems that can arise. Individuals are encouraged to examine their own gambling patterns, risky situations and impact on others. They are requested to self-monitor their gambling and document urges to gamble. To date, other than its incorporation into treatment outcome studies of Ladouceur and colleagues (e.g., Bujod et al., 1994; Ladouceur et al., 1996; Ladouceur et al., 1998; Ladouceur & Walker, 1998; Sylvain et al., 1997) there has been a paucity of research addressing its effectiveness in the gambling field.

Adverse Consequences and Losing: Contemplation

During this stage, there is recognition of gambling-related problems and some receptivity to the possibility of addressing them. The major clinical challenge is to address a person's **ambivalence** about whether they wish to alter their gambling behavior and deal with the associated problems. Since ambivalence reflects concurrent positive and negatives feelings about an object, affect or behavior, clinicians need to acknowledge that gambling provides positive benefits but also costs (Miller & Rollnick, 1991; Shaffer, 1994; Shaffer & Simoneau, 2001). The counselor acknowledges that modifying the gambling will require relinquishing some current activities. A decision balance exercise that explores the pluses and minuses of maintaining the gambling behavior and the gains and losses of changing is the major vehicle for resolving the ambivalence about the value of curbing their gambling. A seminal event such as the loss of a large sum of money or job loss, often referred to as a **turning point,** clearly marks the decision to commit to major changes.

Turning Points: Preparing for Change

During this stage the gambler accepts that changes are necessary and worthwhile. The major challenge is **making choices** and the key activity is planning. Efforts are directed to clinical goal setting and treatment planning. The individual and counselor together explore therapeutic options and appropriate action steps. Parameters to be considered include type of setting, program philosophy, level of care, kind and variety of therapeutic modalities, group or individual format, professional profile, and cost. Matching is the important principle. Success at this stage is often linked to honoring the person's preferences and validating the acceptability of their choices.

Action: Making Changes

During this stage, the major theme is active **learning**. The treatment strategy during action is to encourage the gambler to initiate a range of **new behaviors** based on the acquisition of new knowledge, insight, attitudes and skills. Identifying and substituting a different leisure activity to replace the time spent gambling is an important component of a healthy recovery. Solution focused brief therapy for problem gamblers is being utilized and holds considerable promise. It has been implemented, successfully in the substance abuse field, however research in gambling treatment is highly limited (Dickerson, Hinchy & Legg-England, 1990). The introduction of a support program such as the fellowship of Gamblers Anonymous can be highly beneficial.

Relapse Prevention or Change Maintenance

To achieve treatment goals, the focus at this stage is to **practice** the new competencies in order to sustain a balanced, healthy lifestyle. Adult learning theory recognizes that developing and mastering new behaviors requires training and repetition. Relapses can occur and attention to situational risk is a critical component of relapse.

Clinicians have noted that the clinician's task at each stage is relatively specific (Brosky, 2001; Shaffer, 1997; Shaffer & LaPlante, in press; Shaffer & Robbins, 1995). For example, when treatment seekers are unable or unwilling to recognize the influence that gambling has on

their day-to-day experience, clinicians need to help them experience doubt about the current behavior and exercise their ambivalent feelings about change. Once aware of how gambling influences their life, clinicians need to help people by having them consider the costs and benefits associated with their current behavior patterns and consider similarly the costs and benefits associated with change. During the active change stage of any addictive behavior, but gambling in particular, it is important to teach new skills and support existing skills that provide for alternative activities that are incompatible with gambling and therefore support change. During relapse prevention and change maintenance, gamblers in recovery need to practice their new behaviors and skill sets; they need to revisit their ambivalence about change and determine that the new behavior patterns are worthwhile; they need to grieve their loss and separation from gambling; finally, they need to reframe any lapse or relapse experiences as opportunities for learning.

There is one major caveat regarding the stage change model and motivational enhancement counseling. Observers often incorrectly think that changes occur in a linear and progressive fashion. In reality, the change process is recursive with many opportunities to revisit earlier stages and successfully navigate the tasks of recovery necessary to grow as a person and rebuild one's life (Shaffer, 1992, 1997; Shaffer & Robbins, 1995).

Complementary Services

Services complementary to psychological counseling are available. These community resources offer an opportunity for a change in lifestyle, financial well-being and a balanced approach to health recovery.

Financial Management

Financial counseling can assist people with gambling-related debt to initiate a financial plan, learn budget management and develop a payment plan (National Endowment for Financial Education & National Council on Problem Gambling, 2000). This counseling support should be made available to both gamblers and those affected by their gambling debt. Since a preoccupation with money and credit is central to the disordered gamblers' experience, it is essential to address their financial obligations and responsibilities during treatment. By diminishing these very real and pressing problems, treatment can reduce the stress and anxiety associated with financial debt. By developing a carefully and realistically crafted financial plan, people with gambling problems can stimulate and maintain a sense of personal control and the consequent sense of hopefulness that it encourages.

Leisure Substitution

To date, there are no empirical studies in the gambling literature that specially address this strategy. However, for many individuals who reduce their problem gambling, there is a need to fill time otherwise occupied with gambling. In addition, physical activity through aerobic exercise (e.g., jogging, swimming or bicycling), as well as weight and flexibility training can improve mood, decrease anxiety and provide socialization (Hays, 1999; D. A. Korn, 2000; Sachs & Buffone, 1984; United States Department of Health and Human Services, 1996). Since there is the potential for significant health and social benefit and minimal risk of harm, it seems prudent to encourage this new use of leisure time and support further study as to its effectiveness.

Twelve Step Facilitation

As mentioned before, twelve-step facilitation is a fellowship based on the principles of Gamblers Anonymous (GA) and is not a professional treatment. During treatment, however, many clinicians actively encourage individuals to attend GA meetings and to maintain journals of their attendance and participation. Typically, clinicians place primary emphasis during treatment sessions on GA steps 1 through 5. The twelve-steps of GA are summarized in Table 36. In addition, clinicians sometimes assign readings from the GA literature to complement materials introduced during therapy. Nevertheless, it is important to emphasize that these activities are not considered treatment but are complementary services.

Table 36: The GA Twelve Steps[26]

We admitted we were powerless over gambling - that our lives had become unmanageable.
Came to believe that a Power greater than ourselves could restore us to a normal way of thinking and living.
Made a decision to turn our will and our lives over to the care of this Power of our own understanding.
Made a searching and fearless moral and financial inventory of ourselves.
Admitted to ourselves and to another human being the exact nature of our wrongs.
Were entirely ready to have these defects of character removed.
Humbly asked God (of our understanding) to remove our shortcomings.
Made a list of all persons we had harmed and became willing to make amends to them all.
Make direct amends to such people wherever possible, except when to do so would injure them or others.
Continued to take personal inventory and when we were wrong, promptly admitted it.
Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
Having made an effort to practice these principles in all our affairs, we tried to carry this message to other compulsive gamblers.

Other Psychological Therapies

In addition to supportive, family and group psychotherapy, a number of other therapeutic approaches have been tried with disordered gamblers; however, case control or randomized clinical trials have not been sufficiently applied to determine the effectiveness of these modalities. Other treatments for gambling problems have tried, for example, eye movement desensitization and reprogram (EMDR) (Henry, 1996), acupuncture, hypnosis, meditation and biofeedback. However, to date there are only professional opinion and clinical experience to guide a clinician's intervention choice and outcome expectation.

Psychopharmacology

There is no specific pharmacotherapy protocol currently approved specifically for the treatment of disordered gambling. A variety of drug treatments, however, are being tested for application to gambling-related disorders. Since gambling typically co-occurs with other mental problems (Crockford & el-Guebaly, 1998b; Shaffer & Korn, 2002), physicians treating mental illness and addiction (e.g., psychiatrists, primary care physicians, addiction and behavioral medicine clinicians) do prescribe various psychotherapeutic agents for problem and pathological gamblers as complementary or adjunctive therapy. The use of pharmacological agents for pathological gamblers rests upon clinical experience with treating other mental disorders that share similar symptomatology or have overlapping theoretical and neurochemical considerations. As with other disorders, treatment should begin at the least invasive level. Therefore, clinician facilitated psychotherapy and counseling (e.g., cognitive and behavioral therapy) in combination with a support group is the typical first treatment option. When clinicians determine that prescription drugs are a potentially useful adjunct to this treatment plan, pharmacotherapy should be implemented in combination with counseling and other psychosocial interventions.

A role for pharmacotherapy during the treatment of disordered gambling shows significant promise (e.g., Hollander, Buchalter, DeCaria, & Concetta, 2000). Neurobiology research reveals the involvement of serotonin (Moreno, Saiz-Ruiz, & Lopez-Ibor, 1991), norepinephrine (DeCaria et al., 1998; Siever, 1987) and dopamine (Bergh, Eklund, Sodersten, & Nordin, 1997; Blum et al., 2000; Comings, 1998) in various expressions of gambling behavior. These neurotransmitters have been associated with the expression of urges, impulsivity, risk-taking and the brain's reward system. The development of specific pharmacotherapy for use

[26] (Gamblers Anonymous, 2002).

with pathological gamblers is currently an area of active clinical research. The following discussion will review the primary drug classes and possible agents that are among the leading candidates for emerging pharmacotherapeutic protocols (Grant, Kim, & Potenza, in press).

Opioid Antagonists (OA)

Naltrexone, a competitive narcotic antagonist, blocks opioid receptors and the production of endogenous opioids. It has been recently approved for the *treatment of alcohol dependence* where it reduces alcohol **cravings** and reduces the **pleasurable effects** of alcohol when ingested (O'Malley et al., 1992). The recommended starting dose for alcohol treatment is 25mg daily for two days followed by the usual dose of 50mg daily, continued for six months. Similar effects are postulated for gambling (Crockford & el-Guebaly, 1998a). Researchers at the University of Minnesota recently reported significantly reduced gambling urges among pathological gamblers and theorize about its usefulness in treating pathological gamblers (Kim, Grant, & Adson, 2001). It is generally well tolerated but can cause mild gastrointestinal upset. Naltrexone should be used carefully in people with any degree of liver disease and the implementation of a monitoring protocol for hepatotoxicity is recommended. An adequate dose of 100mg/day or more for 4-6 weeks for the treatment of pathological gambling is often necessary before symptom relief is evident (Grant et al., in press).

Selective Serotonin Reuptake Inhibitors (SSRIs)

This class of drug is indicated for the treatment of *obsessive-compulsive disorders, other anxiety disorders* and *depression* (Hollander, 1998; Hollander et al., 2000). Members of this group comprise fluoxetine (Prozac), fluvoxamine (Luvox), paroxetine (Paxil), sertraline (Zoloft), and citalopram (Celexa). Each of these agents varies in the ability to inhibit serotonin, noradrenaline, and dopamine uptake and produce a booster effect with these neurotransmitters. The rationale for using these medications with gamblers relates to their **obsessive preoccupation** with gambling and the money with which to gamble; in addition, disordered gamblers evidence a repetitive and **compulsive** pattern of activity (Hollander, 1998; Hollander et al., 2000). **Depression** or **anxiety** also tends to accompany a treatment seeker's clinical profile. From this perspective, we conceptualize pathological gambling to reside towards the compulsivity end of a compulsivity-impulsivity continuum.

Fluvoxamine (Luvox) shows promise as a drug treatment for pathological gamblers. For example, a study of 10 pathological gamblers demonstrated decreased gambling urges and behavior at the end of a 16-week trial (Hollander, 1998). Further research utilizing randomized design, larger sample size, and longer periods to measure outcomes to validate these findings has begun (Hollander et al., 2000).

The doses of these SSRIs required to treat pathological gambling appear to be higher than the average dose generally required to treat depressive disorders but similar to the dosage typically utilized during the treatment of obsessive compulsive disorder. For example, fluvoxamine at 200 to 300 mg/day or paroxetine at 40 to 60 mg/day for 10 – 12 weeks may be required before symptom relief is evident (Grant et al., in press).

Mood Stabilizers

Mood stabilizers, for example, amitriptyline (Elavil) and divalproex (Epival), which are used in the treatment of bipolar disorder, also have a theoretical rationale for use with gambling disorders. For example, the American Psychiatric Association considers a manic episode accounting for excessive gambling as an exclusionary criterion for the diagnosis of pathological gambling (American Psychiatric Association, 2000). Carbamazepine (Tegretol), showed significant clinical benefit during a 30-month treatment period with a single case report of a chronic pathological gambler (Haller & Hinterhuber, 1994). Lithium carbamate also was reported effective in treating three pathological gamblers with concurrent mood disorders (Moskowitz, 1980). Since mania and depression can often co-occur among disordered gamblers (Shaffer & Korn, 2002), mood stabilizers represent a potentially important treatment resource.

Other Drugs

Olanzapine (Zyprexa), an atypical anti-psychotic medication, currently is undergoing a clinical trial with pathological gamblers (Rugle, 2000). Other drugs that theoretically might be helpful in the treatment of pathological gambling include ondasetron (Zofran), a selective serotonin receptor antagonist (SSRA) that recently has been demonstrated effective in a randomized clinical trial during the treatment of early onset alcohol dependency (Johnson et al., 2000). Bupropion (Wellbutrin), a norepinephrine dopamine modulator (NDM), has demonstrated efficacy as an anti-craving medication during the treatment of nicotine dependence even though the mechanism of action in smoking cessation is not well understood. Methylphenidate (Ritalin) has been used in the treatment of attention deficit disorder, which has impulsive characteristics similar to pathological gambling. Finally, in a case report, Baclofen (Lioresal), a GABA agonist and muscle relaxant, was described as able to reduce cocaine cravings and block the cocaine high. Monetary reward in a gambling-like experiment produced brain activation similar to that observed in cocaine addicts (Breiter et al., 2001).

Integrated Treatment Strategies: Combining Psychotherapy and Pharmacotherapy

Since gamblers seeking treatment often present with dysthymia and depression, clinicians should consider the potential value of a treatment strategy that addresses depression. In an important carefully conducted randomized clinical trial of pharmacotherapy (i.e., Nefazadone) versus cognitive behavior therapy compared with a combination of these treatments, Keller et al. (2000) demonstrated that the combination of pharmacotherapy and cognitive behavioral therapy yielded meaningfully higher rates of recovery from depression than either of these treatments alone. While clinical trials of combination studies are few, this research provides strong evidence suggesting that clinicians consider the potential benefits of adjunctive treatments. Further, it is likely that other combinations of pharmacotherapy and psychotherapy also will yield improved treatment outcomes compared with each of these treatments. However, without evidence from carefully controlled clinical trials to provide support for combining a particular psychotherapy with a specific pharmacotherapy, it is premature to recommend specific combinations of treatment.

Treatment of Disordered Gambling in Special Populations

Special population segments represent groups of individuals with particular or distinctive treatment needs. These needs might be related to the influence of culture, gender, age, or social economic status as these alone or in combination apply to their gambling behavior, mental well-being and overall health recovery. Special populations are an emerging area of public health interest from both a prevention and treatment perspective (Korn & Shaffer, 1999b). As practitioners and researchers gain experience with these diverse groups, improved treatment strategies likely will evolve reflecting scientifically validated research. However, at this early stage of our understanding, we encourage clinicians to develop enhanced awareness of the complexity and variability of gambling beliefs, practices and vulnerabilities amongst these various peoples; by developing an improved assessment and understanding of these factors, we expect that clinical practice, treatment programs, service design and research strategies will benefit.

Youth[27]

Youth are at-risk for gambling problems (e.g., Shaffer, Hall, Vander Bilt, & George, in press). Prevalence estimates of disordered gambling among youth reveal rates that are two to four times that of the general adult population (e.g., Shaffer et al., 1997a; Shaffer et al., in press; Shaffer & Korn, 2002). Screening instruments exist that are specific to the adolescent population. For example, the SOGS-RA (Winters,

[27] A special issue of the *Journal of Gambling Studies* focusing on youth gambling recently has been published. It represents an important resource for more detailed material about youth and gambling with important content and references (Gupta & Derevensky, 2000b).

Stinchfield, & Fulkerson, 1993), based on the DSM-III, and the MAGS (Shaffer et al., 1994), based on the DSM-IV, are widely used instruments. Risk factors for youth problem gambling include low self-esteem, conformity and self-discipline, sensation seeking and associated significant anxiety, feelings of depression and substance abuse. Cognitive behavioral interventions in a non-randomized study involving a small number of adolescents have demonstrated clinically significant improvements for perception of control and severity of problem (Ladouceur, Boisvert, & Dumont, 1994). Recently, a model describing how young people might develop and stop gambling problems targets interventions to adolescent stages of change. This strategy notes the importance of recognizing that how a young person becomes a problem gambler might be very different from how they stop this pattern of behavior (DiClemente, Story, & Murray, 2000). Based upon work in the substance abuse treatment field (e.g., Prochaska, 1992), this new work holds promise but will require more support through extensive research before we can claim with confidence that it is an evidence-based intervention. Gupta and Derevensky describe the basic tenets of treatment with adolescents (Gupta & Derevensky, 2000a). The treatment process in general and with young people in particular includes clinical components that focus on themes such as acceptance of the problem, establishment of mutual trust, involvement of family and restructuring of leisure time (Gupta & Derevensky, 2000a).

Older Adults

Seniors represent a sizable and growing proportion of the adult population. In addition, this segment of the population appears to be represented disproportionately at bingo halls, charitable gaming activities, and day excursions to casinos. Although seniors generally take fewer risks compared with their younger counterparts, there is concern about their vulnerability to gambling problems springing from their fixed incomes, social isolation and declining health. Clinicians need to be cognizant that older adults can experience a sense of loss related to health, independence, purpose in life and friendships, and might turn to gambling to satisfy those unmet needs. In addition, older adults might experience various levels of cognitive impairment and concurrent mental disorders including substance abuse that might adversely influence their pattern and frequency of gambling (McNeilly & Burke, 2000). However, seniors also might receive health benefits from their gambling activity (Korn & Shaffer, 1999b; Shaffer & Korn, 2002). For example, gambling among older adults provides a social experience and the opportunity to connect to their peers; similarly, like low level alcohol use, the excitement and activity associated with gambling likely has cardiovascular benefits. Therefore, treatment efforts with older adults require a careful assessment of the costs and benefits of gambling. A clinical assessment with this population segment, for example, should at the very least examine the impact of gambling on depression, physical mobility and quality of life before deciding on intervention strategies and treatment goals.

Women

Women are gambling more than in previous years. In the United States, the percentage of all women who have ever gambled rose between 1975 and 1998 by 22%, from 60% to 82%. During the same period, the percentage for males increased by 13%, from 73% to 86% (National Gambling Impact Study Commission, 1999). Though there is little scientific evidence to support this perspective, clinicians often view women as having distinct gambling behaviors, often described as “escape” gambling. The clinical tradition suggests that they prefer to gamble in casinos and bingo halls that are perceived to be safe. Female gamblers favor games such as slot machines, video lottery terminals (VLTs) and bingo that are not skilled based. Compared to males, females gamble more to reduce boredom, escape form responsibility and relieve loneliness than they do for excitement, financial gain or pleasure. Despite the absence of evidence to support these views, these perspectives have endured. In addition to these clinical issues, treatment professionals need to be sensitive to the possible history of trauma, difficult economic realities, and a preference for women specific setting and programming as well as group format for counseling.

Aboriginal People / Indians / First Nations

These people may be particularly vulnerable to the negative impacts of gambling for a variety of complex health and social reasons. In general, Indians report relatively high rates of problem and pathological gambling, significant unemployment, and poor mental health status indicators as well as higher rates of substance-related problems than does the general population (Elia & Jacobs, 1993; National Steering Committee, 1999; Office of Public Health, 1999; Wardman, el-Guebaly, & Hodgins, 2001). This potential problem might be exacerbated by the growth of gambling opportunities in or around Indian reservations and the higher rates of gambling problems observed among casino employees (Shaffer & Hall, in press; Shaffer, Vander Bilt, & Hall, 1999). Counselors should be sensitive to tribal beliefs and traditional healing practices when formulating treatment strategies.

Ethno-cultural Minorities

Perceptions of gambling differ across cultures. Recent immigrants may be particularly vulnerable to gambling problems because of low socio economic status, financial pressures and sense of marginalization. Clinicians should consider the use of an interpreter to understand both culture and language and offer interventions in a culturally sensitive manner. Readers interested in more information are referred to: http://erc.msh.org/mainpage.cfm?file=1.0.htm&module=provider&language=English.

The Homeless

The first studies of homeless treatment seekers reveal that, like other psychiatric population segments, community service recipients in general and the homeless in particular evidence elevated rates of gambling disorders (Lapage, Ladouceur, & Jacques, 2000; Shaffer, Freed, & Healea, under review). For example, evaluating 171 consecutive treatment seekers, Shaffer and Freed reported past year prevalence rates at intake of level 2 and 3 gambling disorders (i.e., 12.8 and 5.4, respectively) that were significantly higher among this population than among the general adult population (Shaffer et al., under review). Issues of access to treatment resources are a key consideration in designing and funding services for the homeless at a community and practitioner level.

Gambling Disorders Among Patients with Comorbid Mental Disorders

The various versions of the DSM that have included pathological gambling as a distinct disorder also have drawn attention to the possibility that other disorders might coexist with pathological gambling (American Psychiatric Association, 1980, 1987, 1994, 2000). A variety of mental disorders occur at disproportionately high levels among disordered gamblers (Crockford & el-Guebaly, 1998b; Shaffer & Korn, 2002). These include substance use disorders, mood disorders, anxiety disorders, personality disorders and impulse disorders. Despite this observation, there is a paucity of empirical prevalence and treatment research about the comorbidity of gambling and other psychological disorders (G. W. Hall et al., 2000; Lesieur & Blume, 1990; Lesieur, Blume, & Zoppa, 1986; Petry, 2000b; Shaffer, Vander Bilt et al., 1999; Slutske et al., 2000; Westphal, Rush, & Stevens, 1998). Given the extent of comorbid mental disorders among treatment seekers with gambling disorders, future treatments are increasingly more likely to involve the use of psychoactive medications.

Families

Gambling-related family problems deserve to be positioned centrally as an important issue for clinicians. When family members are problem or pathological gamblers, they can adversely affect their relatives and significant others. Researchers in the gambling field have described a range of negative health and social consequences for family members associated with adult disordered gamblers. These effects have been identified in spouses, siblings, children, and parents (e.g., Korn & Shaffer, 1999b). Family issues include dysfunctional relationships, loss of family income, neglect, violence and abuse. The health and human service professionals need to be aware of these potential consequences and

elaborate a full range of family supports interventions. Family therapy and couples therapy are important therapeutic modalities when gambling-related relationship difficulties arise.

Gambling Treatment Emergencies

The primary psychiatric emergency that might be associated with gambling disorders is the risk of suicide. Suicidal ideation, attempts and completions among disordered gamblers are mentioned as associated with disordered gambling. However, the research evidence demonstrating a causal relationship is inconclusive (General Accounting Office, 2000; National Research Council, 1999; Shaffer & Korn, 2002). Not withstanding, clinicians working with disordered gamblers need to be vigilant to this possibility. For example, the threat of suicide can arise when losses lead to intense feelings of hopelessness, desperation and conflict or when other conditions such as substance abuse, depression or major mental illness coexist. Teenagers, older adults, and Indian /First Nation peoples are vulnerable groups at special risk. Urgent evaluation of risk and etiology followed by prompt treatment or referral is required.

The Natural History of Gambling Treatment: Stages of Events and Activities

Figure 9 reflects the natural history of treatment and major intervention options that are typically associated with a treatment episode (Shaffer & LaPlante, in press). These events often repeat and no single treatment episode should be interpreted to represent a complete treatment history. With gambling and other addictive disorders, it is common for treatment seekers to experience multiple treatment episodes. Multiple treatment experiences do not seem to portend treatment failure; rather multiple treatments simply represent a longer journey to a destination which others arrived at more rapidly. In addition, Figure 9 is not intended to represent a detailed algorithm for clinical decision-making. Although not addressed in this practitioner's guide, avenues for self-assessment and self-care also are acknowledged.

Administrative Matters for Clinicians

There are a number of conventional professional matters with respect to clinician and client responsibilities and rights that also apply to gambling treatment. These issues are imbedded in professional standards, program policies and client handbooks. Framers of these documents intend them to ensure quality care and a safe professional environment. For example, informed consent must be obtained prior to initiating a therapeutic process. Confidentiality and privacy of shared information is always central to treatment except when there is written consent to release clinical material or when required by law to report. A written treatment agreement or contract assures that there is a clear understanding of the responsibilities and expectations between the participants in a treatment process. Clinicians should consider increasing the intensity of treatment when clients fail to progress at a lower level of care. Similarly, clinicians have an option to terminate treatment when in the clinical setting there is evidence of threats to the safety of others, disruptive or violent behavior, or illegal activity on the premises. There always should be an administrative provision for a review process of therapeutic care and closure.

Attachments

Principles of Drug Addiction Treatment: A Research-Based Guide

No single treatment is appropriate for all individuals.

Treatment needs to be readily available.

Effective treatment attends to multiple needs of the individual, not just his or her drug use.

An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that the plan meets the person's changing needs.

Remaining in treatment for an adequate period of time is critical for treatment effectiveness.

Counseling (individual and/or group) and other behavioral therapies are critical components of effective treatment for addiction.

Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.

Addicted or drug-abusing individuals with coexisting mental disorders should have both disorders treated in an integrated way.
Medical detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug use.

Treatment does not need to be voluntary to be effective

Possible drug use during treatment must be monitored continuously.

Treatment programs should provide assessment for hiv/aids, hepatitis b and c, tuberculosis and other infectious diseases, and counseling to help patients modify or change behaviors that place them or others at risk of infection.

Recovery from drug addiction can be a long-term process and frequently requires multiple episodes of treatment.

(National Institute on Drug Abuse, 1999)

Commonly Used Screening Instruments

This section provides a resource guide to commonly used and readily available screening instruments by providing a list of measures. This list is not intended to be exhaustive; rather, the instruments presented here are representative of screening devices commonly used in clinical practice and research across a variety of settings and content areas confronted during the treatment of gambling and other addictive disorders. To help identify screening and assessment instruments, we required each measure under consideration to have been published. We operationally defined publication as successfully completing a scientific peer review process; reports released by commissions and institutions failed to meet the requirements of scientific peer review.

Before selecting an instrument for use, we encourage clinicians to consider the psychometric properties of screening and other assessment instruments against the purpose for which they are used and the objectives of the instrument. Since the purposes of screening and assessment shift over time and across settings, the psychometric properties also change. Consequently, clinicians must choose instruments carefully and interpret them cautiously. The following instruments represent a variety of different areas of behavior and experience that often are associated with addiction. We also encourage readers to consider using the American Psychiatric Association's resource book on psychiatric measures (2000) as a resource.

Problem Gambling

South Oaks Gambling Screen (SOGS)

Lesieur HR, Blume SB: The South Oaks Gambling Screen (SOGS): a new instrument for the identification of pathological gamblers. Am J Psychiatry 144:1184–1188, 1987

Lesieur HR, Blume S: Revising the South Oaks Gambling Screen in different settings. Journal of Gambling Studies 9:213–223, 1993

South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA)

Winters, K. C., Stinchfield, R., & Fulkerson, J. (1993). Patterns and characteristics of adolescent gambling. Journal of Gambling Studies, 9(4), 371-386.

Massachusetts Gambling Screen (MAGS)

Shaffer, H. J., LaBrie, R., Scanlan, K. M., & Cummings, T. N. (1994). Pathological gambling among adolescents: Massachusetts gambling screen (MAGS). Journal of Gambling Studies, 10(4), 339-362.

Diagnostic Interview Schedule (DIS)

Robins LN, Helzer JE, Croughan J, et al: National Institute of Mental Health Diagnostic Interview Schedule. Arch Gen Psychiatry 38:381–389, 1981

Robins LN, Marcus L, Reich W, et al: Diagnostic Interview Schedule, Version IV. St. Louis, MO, Department of Psychiatry, Washington School of Medicine, 1996

Composite International Diagnostic Interviewing (CIDI)

World Health Organization. (2001). Composite International Diagnostic Interview: World Health Organization.

Readiness to Change

University of Rhode Island Change Assessment (URICA)

McConnaughy EA, DiClemente CC, Prochaska JO, et al: Stages of change in psychotherapy: a follow up report. Psychotherapy 26(4):494–503, 1989

Suicidality

Beck Scale for Suicide Ideation (BSS)

Beck AT, Steer RA: Beck Scale for Suicide Ideation Manual. San Antonio, TX, Harcourt Brace, 1991

Suicide Intent Scale (SIS)

Beck AT, Schuyler D, Herman I: Development of suicidal intent scales, in The Prevention of Suicide. Edited by Beck AT, Resnik HP, Lettieri DJ. Bowie, MD, Charles Press, 1974

Beck Hopelessness Scale (BHS)

The BHS is copyrighted and was originally published in 1988 by:
The Psychological Corporation
555 Academic Court
San Antonio, TX 78204-2498
Phone: 800-211-8378
Internet: www.psychcorp.com

Anxiety Disorders

Manifest Anxiety Scale (MAS)

Taylor JA: A personality scale of manifest anxiety. Journal of Abnormal Social Psychology 48:285–290, 1953

Hamilton Anxiety Rating Scale (HARS)

Hamilton M: The assessment of anxiety states by rating. Br J Med Psychol 32:50–55, 1959

Clinical Anxiety Scale (CAS)

Snaith RP, Baugh SJ, Clayden AD, et al: The Clinical Anxiety Scale: an instrument derived from the Hamilton Anxiety Scale. Br J Psychiatry 141:518–523, 1982

Beck Anxiety Inventory (BAI)

Beck AT, Epstein N, Brown G, et al: An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol 56:893–897, 1988

Fear Questionnaire (FQ)

Marks IM, Mathews AM: Brief standard self-rating scale for phobic patients. Behav Res Ther 17:263–267, 1979

Depressive Disorder

Beck Depression Inventory (BDI)

Beck AT, Ward CH, Mendelson M, et al: An inventory of measuring depression. Arch Gen Psychiatry 4:53–63, 1961

Hamilton Rating Scale for Depression (Ham-D)

Hamilton M: A rating scale for depression. J Neurol Neurosurg Psychiatry 23:56–62, 1960

Guy W: ECDEU Assessment Manual of Psychopharmacology —Revised (DHEW Publ No ADM 76-338). Rockville, MD, U.S. Department of Health, Education, and Welfare, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, NIMH Psychopharmacology Research Branch, Division of Extramural Research Programs, 1976

Inventory of Depressive Symptomatology (IDS)

Rush AJ, Giles DE, Schlesser MA, et al: The Inventory for Depressive Symptomatology (IDS): preliminary findings. Psychiatry Res 18:65–87, 1985

Raskin Scale (Three-Area Severity of Depression Scale)

Raskin A: Three-Area Severity of Depression Scale, in Dictionary of Behavioral Assessment Techniques. Edited by Bellack AS, Herson M. New York, Pergamon, 1988

Zung Self-Rating Depression Scale (Zung SDS)

Zung WWK: A self-rating depression scale. Arch Gen Psychiatry 12:63–70, 1965

Substance Use Disorders

Alcohol Use Disorders Identification Test (AUDIT)

Babor TF, de la Fuente JR, Saunders J, et al: AUDIT, The Alcohol Use Disorders Identification Test: guidelines for use in primary health care (WHO Publ No PSA/92.4). Geneva, World Health Organization, 1992

Addiction Severity Index (ASI)

McLellan AT, Luborsky L, Woody GE, et al: An improved diagnostic evaluation instrument for substance abuse patients: the Addiction Severity Index. J Nerv Ment Dis 168(1):26–33, 1980

Drug Abuse Screening Test (DAST)

Skinner HA: The Drug Abuse Screening Test. Addict Behav 7:363–371, 1982

Fagerstrom Test for Nicotine Dependence (FTND)

Fagerstrom KO, Schneider NG: Measuring nicotine dependence: a review of the Fagerstrom Tolerance Questionnaire. J Behav Med 12(2):159–182, 1989

Heatherton TF, Kozlowski LT, Frecker RC, et al: The Fagerstrom Test for Nicotine Dependence: A revision of the Fagerstrom Tolerance Questionnaire. British Journal of Addiction 86:1119–1127, 1991

Michigan Alcoholism Screening Test (MAST)

Selzer ML: The Michigan Alcoholism Screening Test: the quest for a new diagnostic instrument. Am J Psychiatry 127(12):1653–1658, 1971

Selzer ML, Vinokur A, van Roojen L: A self-administered Michigan Alcoholism Screening Test (SMAST). J Stud Alcohol 36:117–126, 1975

Blow F: Michigan Alcoholism Screening Test —Geriatric Version (MAST-G). Ann Arbor, MI,University of Michigan Alcohol Research Center, 1991

Pokorny AD, Miller BA, Kaplan HB: The brief MAST: a shortened version of the Michigan Alcoholism Screening Test. Am J Psychiatry 129:342–345, 1972

Alcohol Dependence Scale (ADS)

Skinner HA, Allen BA: Alcohol dependence syndrome: measurement and validation. J Abnorm Psychol 91(3):199–209, 1982

Obsessive Compulsive Drinking Scale (OCDS)

Anton RF, Moak DH, Latham P: The Obsessive Compulsive Drinking Scale: a self-rated
instrument for the quantification of thoughts about alcohol and drinking behavior. Alcohol Clin Exp Res 19(1):92–99, 1995

Brief Screen for Adolescent Substance Abuse (CRAFFT)

Knight, J. R., Shrier, L. A., Bravender, T., Farrell, M., Vander Bilt, J., & Shaffer, H. J. (1999). CRAFFT: a new brief screen for adolescent substance abuse. Archives of Pediatrics & Adolescent Medicine, 153(6), 591-596.

Certification for Treatment Providers: Recommendations and Resources

To assure that a minimum standard of care is met in providing treatment to compulsive gamblers and their families, we encourage and recommend that compulsive gambling counselors obtain a certification credential. Certification can be obtained by applying to one of the organizations described below. Regardless of the certifying organization, requirements include: an application, a fee, education, supervision, test taking, and references.

American Academy of Health Care Providers in the Addictive Disorders

The American Academy is a non-profit organization; it offers the credential of Certified Addictions Specialist (C.A.S.) credential, which reflects clinical competency in the treatment of compulsive gambling and other addictive disorders (i.e., alcohol and other drug use disorders, eating disorders, sex addiction).

Contact: The American Academy of Health Care Providers in the Addictive Disorders
314 West Superior Street, Suite 702
Duluth, MN 55802
Phone: 218-727-3940
Fax: 218-722-0346
E-mail: info@americanacademy.org
Website: www.americanacademy.org

National Gambling Counselor Certification Board

The National Gambling Counselor Certification Board, a division of the National Council on Problem Gambling, a non-profit organization, offers the credential of National Certified Gambling Counselor (NCGC) attesting to clinical competency in the treatment of compulsive gambling.

Contact: National Council on Problem Gambling, Inc.
208 G Street, NE
Washington, DC 20002
202-547-9204
Email: ncpg@erols.com
Website: www.ncpgambling.org

Criteria for Treatment Matching

Criteria for Acute Inpatient Hospital Care[28]

Failure to progress in less controlled and intense levels of treatment.

High-risk chemical detoxification, e.g., withdrawal that might be associated with seizures or delirium tremens.

Chemical detoxification complicated by high levels of tolerance to multiple substances.

Acute exacerbation of medical and/or psychiatric problems that relate to chemical dependence, e.g., cardiomyopathy, hepatitis, severe depression.

Concomitant medical and/or psychiatric problems that potentially could complicate treatment, e.g., diabetes, bipolar affective disorder, hypertension.

Severely impaired social, familial or occupational functioning.

Criteria for Non-hospital Residential Care

Failure to progress in less intensive levels of treatment.

Chemical detoxification, if necessary, can proceed safely without close medical supervision.

The patient is psychiatrically and/or medically stable but requires daily supervision.

The patient's social and/or vocational level of functioning requires separation from aspects of their regular environment.

The patient's interpersonal and daily living skills are sufficiently developed to permit a satisfactory level of functioning in a milieu environment.

Criteria for Partial Hospitalization or Day Treatment Care

Chemical detoxification, if necessary, can proceed without close medical supervision.

The patient is psychiatrically and/or medically stable but requires supervision daily rather than weekly or biweekly.

The patient's interpersonal and daily living skills are sufficiently developed to permit an autonomous level of functioning in a non-residential environment.

The patient is psychiatrically stable but may need some to moderate support.

The patient has a social system capable of providing the necessary level of support, e.g., friends, family, work.

Criteria for Outpatient Care

The patient's psychiatric/medical problems are stable (i.e., daily or weekly supervision is unnecessary).

The patient is capable of an autonomous level of functioning in the present social environment.

The patient can function effectively in individual, group, and/or family therapy environments.

Medical supervision is unnecessary for withdrawal.

The patient is willing to participate in a treatment program.

[28]Adapted from Giuliani and Schnoll (1985).

Special Note on Taking a Substance Use or Gambling History

At the very least, clinicians should always cover the following areas when conducting a gambling or substance use history:

•The major categories of drug use or gambling activities

•Amount, route of administration, frequency of use, and the duration of use or the type of game, and the pattern of play

•Setting in which drug(s) are used or gambling is experienced

•How does patient acquire the drug(s) or gain access to gambling activities

•Significant life issues related to drug use or gambling (e.g., precipitating crisis, hospitalization, etc.)

•Any reports of drug overdose or binge gambling

•The specific subjective effects produced by the use of every drug reported or every game played

References

Abbott, M. W. (2001). *What do we know about gambling and problem gambling in New Zealand? Report Number Seven of the New Zealand Gaming Survey*. Wellington: New Zealand Department of Internal Affairs.

American Psychiatric Association. (1980). *DSM-III: Diagnostic and statistical manual of mental disorders* (Third ed.). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders, third edition, revised*. Washington, DC: American Psychiatric Association.

American Psychiatric Association. (1994). *DSM-IV: Diagnostic and statistical manual of mental disorders* (Fourth ed.). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders--Text Revision* (Fourth ed.). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association. Task Force for the Handbook of Psychiatric Measures. (2000). *Handbook of psychiatric measures*. Washington, DC: American Psychiatric Association.

Annis, H. (1986). A relapse prevention model for treatment of alcoholics. In N. Heather (Ed.), *Treating Addictive Behaviours: Processes of Change* (pp. 407-433). New York: Plenum Press.

Annis, H., M,. (1985). *Inventory of Drug-Taking Situations*. Toronto: Addiction Research Foundation.

Annis, H., M. (1982). *Inventory of Drinking Situations*. Toronto: Addiction Research Foundation.

Arnold, W. N. (1989). Absinthe. *Scientific American*(June), 112-117.

Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, New Jersey: Prentice-Hall.

Barker, J. C., & Miller, M. (1968). Aversion therapy for compulsive gambling. *Journal of Nervous and Mental Illness, 146*, 285-302.

Berg, I., K,. (1995). Solution-Focussed Brief Therapy with Substance Abusers. In A. M. Washton (Ed.), *Psychotherapy and Substance Abuse* (pp. 223-242). New York: Guildford Press.

Berg, I. K., & Miller, S. D. (1992). *Working with problem drinkers: A solution-focussed approach*. New York: Norton.

Bergh, C., Eklund, T., Sodersten, P., & Nordin, C. (1997). Altered dopamine function in pathological gambling. *Psychological Medicine, 27*, 473-475.

Bergler, E. (1957). *The psychology of gambling*. New York: Hill and Wang.

Beutler, L. E., & Malik, M. L. (Eds.). (2002). *Rethinking the DSM: a psychological perspective*. Washington, D.C.: American Psychological Association.

Blanco, C., Ibanez, A., Saiz-Ruiz, J., Blanco-Jerez, C., & Nunes, E. V. (2000). Epidemiology, pathophysiology and treatment of pathological gambling. *CNS Drugs, 13*(6), 397-407.

Blaszczynski, A. (1998). Controlling Your Urge Using a Relaxation Technique, *Overcoming Compulsive Gambling* (pp. 126-145). London: Robinson.

Blaszczynski, A. (2000). Pathways to Pathological Gambling: Identifying Typologies. *eGambling: The Electronic Journal of Gambling Issues*(1).

Blaszczynski, A., & Steel, Z. (1998). Personality disorders among pathological gamblers. *Journal of Gambling Studies, 14*(1), 51-71.

Blum, K., Braverman, E. R., Holder, M. M., Lubar, J. F., Monastra, V. J., Miller, D., Lubar, J. O., Chen, T. J. H., & Commings, D. E. (2000). Reward deficiency syndrome: a biogenetic model for the diagnosis and treatment of impulsive, addictive, and compulsive behaviors. *Journal of Psychoactive Drugs, 32*(supplement), 1-112.

Breiter, H. C., Aharon, I., Kahneman, D., Dale, A., & Shizgal, P. (2001). Functional imaging of neural responses to expectancy and experience of monetary gains and losses. *Neuron, 30*, 619-639.

Brosky, G. (2001). Update on Methods for Patient Behavior Change. *The Canadian Journal of CME*(March 2001), 135-145.

Brown, J. M., & Miller, W. R. (1993). Impact of motivational interviewing on participation and outcome in residential alcoholism treatment. *Psychology of addictive behaviors, 7*(4), 211-218.

Brown, R. I. F. (1985). *The Effectiveness of Gamblers Anonymous.* Paper presented at the 6th National Conference on Gambling and Risk-taking, Reno.

Brownson, R. C., Newschaffer, C. J., & Ali-Abarghoui, F. (1997). Policy research for disease prevention: challenges and practical recommendations. *American Journal of Public Health, 87*(5), 735-739.

Bujod, A., LaDouceur, R., Sylvain, C., & Boisvert, J. M. (1994). Treatment of pathological gamblers: an experimental study. *Journal of Behavior Therapy & Experimental Psychiatry, 25*(4), 275-282.

Casti, J. L. (1989). *Paradigms lost: images of man in the mirror of science*. New York: William Morrow & Company.

Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: controversies and evidence. *Annual Review of Psychology, 52*(1), 685-716.

Cohen, B. I. (1985). *Revolution in science*. Cambridge: Harvard University Press.

Comings, D. E. (1998). The molecular genetics of pathological gambling. *CNS Spectrums, 3*(6), 20-37.

Crockford, D. N., & el-Guebaly, N. (1998a). Naltrexone in the treatment of pathological gambling and alcohol dependence. *Canadian Journal of Psychiatry, 43*, 86 (letter).

Crockford, D. N., & el-Guebaly, N. (1998b). Psychiatric comorbidity in pathological gambling: a critical review. *Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 43*(1), 43-50.

Crowley, J. W. (Ed.). (1999). *The drunkard's progress: narratives of addiction, despair, and recovery*. Baltimore: John Hopkins University Press.

Cunningham-Williams, R., Cottler, L. B., Compton, W. M., & Spitznagel, E. L. (1998). Taking chances: problem gamblers and mental health disorders -- results from the St. Louis epidemiologic catchment area study. *American Journal of Public Health, 88*, 1093-1096.

Cunningham-Williams, R. M., Cottler, L. B., Compton, W. M., Spitznagel, E. L., & Ben-Abdallah, A. (2000). Problem gambling and comorbid psychiatric and substance use disorders among drug users recruited from drug treatment and community settings. *Journal of Gambling Studies, 16*(4), 347-376.

Custer, R. L. (1981). Prologue. In R. Moore (Ed.), *Compulsion*. New York: Doubleday & Company, Inc.

Custer, R. L. (1982). An overview of compulsive gambling. In L. W. Krinsky (Ed.), *Addictive disorders update* (Vol. VII, pp. 107-124). New York: Human Sciences Press, Inc.

Daghestani, A. N. (1987a). Impotence associated with compulsive gambling. *Journal of Clinical Psychiatry, 48*(3), 115-116.

Daghestani, A. N. (1987b). Why should physicians recognize compulsive gambling? *Postgraduate Medicine, 82*(5), 253-256, 259, 262-263.

DeCaria, C. M., Begaz, T., & Hollander, E. (1998). Serotonergic and noradrenergic function in pathological gambling. *CNS Spectrums, 3*(6), 38-47.

DiClemente, C. C., Story, M., & Murray, K. (2000). On a roll: The process of initiation and cessation of problem gambling among adolescents. *Journal of Gambling Studies, 16*(2-3).

Eber, G., B., & Shaffer, H. J. (2000). Trends in bio-behavioral gambling studies research: quantifying citations. *Journal of Gambling Studies, 16*(4), 461-467.

Echeburua, E., Baez, C., & Fernandez-Montalvo, J. (1996). Comparative Effectiveness of Three Therapeutic Modalities in the Psychological Treatment of Pathological Gambling: Long-Term Outcome. *Behavioural and Cognitive Psychotherapy, 24*, 51-72.

Elia, C., & Jacobs, D. F. (1993). The incidence of pathological gambling among Native Americans treated for alcohol dependence. *International Journal of the Addictions, 28*(7), 659-666.

Ellingstad, T. P., Sobell, L. C., Sobell, M. B., & Planthara, P. (2002). Drug treatment outcome methodology (1993–1997): strengths,

weaknesses, and a comparison to the alcohol field. *Addictive Behaviors, 27*, 319-330.

Ellis, A. (1987). The impossibility of achieving consistently good mental health. *American Psychologist, 42*, 364-375.

Feigelman, W., Wallisch, L. S., & Lesieur, H. R. (1998). Problem gamblers, problem substance users, and dual problem individuals: an epidemiological study. *American Journal of Public Health, 88*(3), 467-470.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Ford, W. E., & Schmittdiel, C. J. (1983). Predicting alcoholism services needs from a national treatment utilization survey. *International Journal of the Addictions, 18*, 1073-1084.

Frank, J. D. (1961). *Persuasion & Healing*. Baltimore: The Johns Hopkins University Press.

Galdston, I. (1951). The psychodynamics of the triad, alcoholism, gambling, and superstition. *Mental Hygiene, 35*, 589-598.

Gambino, B., & Shaffer, H. J. (1979). The concept of paradigm and the treatment of addiction. *Professional Psychology, 10*, 207-223.

Gamblers Anonymous. (2001). *Twenty Questions* [on-line]. Gamblers Anonymous. Retrieved July 16, 2001, from the World Wide Web: http://www.gamblersanonymous.org/20questions.html

Gamblers Anonymous. (2002). *12 step program* [world wide web]. Gamblers Anonymous. Retrieved January 26, 2002, from the World Wide Web: http://www.gamblersanonymous.org/recovery.html

General Accounting Office. (2000). *Impact of gambling: economic effects more measurable than social effects* (Report to the Honorable Frank R. Wolf GGD-00-78). Washington, D.C.: United States General Accounting Office.

Giuliani, D., & Schnoll, S. H. (1985). Clinical decision making in chemical dependence treatment: A programmatic model. *Journal of Substance Abuse Treatment, 2*(4), 203-208.

Goldfried, M. R., & Davison, G. C. (1976). *Clinical behavioral therapy*. New York: Holt, Rinehart and Winston.

Grant, J. E., Kim, S. W., & Potenza, M. N. (in press). Advances in the Pharmacological Treatment of Pathological Gambling Disorders. *Journal of Gambling Studies*.

Gupta, R., & Derevensky, J. L. (2000a). Adolescents with gambling problems: From research to treatment. *Journal of Gambling Studies, 16*(2-3).

Gupta, R., & Derevensky, J. L. (Eds.). (2000b). *Special Issue: Youth Gambling* (Vol. 16). New York: Kluwar Academic.

Gustafson, J. P. (1995). *The dilemmas of brief psychotherapy*. New York: Plenum Press.

Hall, G. W., Carriero, N. J., Takushi, R. Y., Montoya, I. D., Preston, K. L., & Gorelick, D. A. (2000). Pathological gambling among cocaine-dependent outpatients. *American Journal of Psychiatry, 157*(7), 1127-1133.

Hall, M. N., Amodeo, M., Shaffer, H. J., & Vander Bilt, J. (2000). Social workers employed in substance abuse treatment programs: a training needs assessment. *Social Work, 45*(2), 141-154.

Hall, M. N., Shaffer, H. J., & Vander Bilt, J. (1997). Measuring substance abuse treatment provider training needs: developing an index of training need. *Journal of Substance Abuse Treatment, 14*(6), 593-606.

Haller, R., & Hinterhuber, H. (1994). Treatment of pathological gambling with carbamazepine. *Pharmacopsychiatry, 27*, 129.

Havens, L. (1982). The choice of clinical methods. *Contemporary Psychoanalysis, 18*, 16-42.

Havens, L. (1989). *A Safe Place: Laying the Groundwork of Psychotherapy*. Cambridge, MA: Harvard University Press.

Hays, K. F. (1999). *Working It Out: Using Exercise in Psychotherapy*. Washington: American Psychological Association.

Henry, S. L. (1996). Pathological gambling: Etiologic considerations and treatment efficacy of eye movement desensitization/reprocessing. *Journal of Gambling Studies, 12*(4), 395-405.

Hing, N., & Breen, H. (2001). Profiling lady luck: An empirical study of gambling and problem gambling amongst female club members. *Journal of Gambling Studies, 17*(1), 47-69.

Hollander, E. (1998). Treatment of obsessive-compulsive spectrum disorders with SSRIs. *British Journal of Psychiatry, 173*(355), 7-12.

Hollander, E., Buchalter, A. J., DeCaria, C. M., & Concetta, M. (2000). Pathological gambling. *Psychiatric Clinics of North America, 23*(3), 629-642.

Hubble, M. L., Duncan, B. L., & Miller, S. D. (1999). *The heart & soul of change: what works in therapy*. Washington, DC: American Psychological Association.

Imhof, J., Hirsch, R., & Terenzi, R. E. (1984). Countertransferential and attitudinal considerations in the treatment of drug abuse and addiction. *Journal of Substance Abuse Treatment, 1*(1), 21-30.

Imhof, J. E. (1991). Countertransference issues in alcoholism and drug addiction. *Psychiatric Annals, 21*(5), 292-306.

Institute of Medicine. (1990). *Broadening the base of treatment for alcohol problems: report of a study by a committee of the Institute of Medicine , Division of Mental Health and Behavioral Medicine*. Washington DC: National Academy of Science.

Jacobs, D. F. (1989). A general theory of addictions: rationale for and evidence supporting a new approach for understanding and treating addictive behaviors. In T. N. Cummings (Ed.), *Compulsive gambling: theory, research & practice* (pp. 35-64). Lexington, MA: Lexington Books.

Johnson, B. A., Roache, J. D., Javors, M. A., DiClemente, C. C., Cloninger, C. R., Prihoda, T. J., Bordnick, P. S., Ait-Daoud, N., & Hensler, J. (2000). Ondansetron for Reduction of Drinking Among Biologically Predisposed Alcoholic Patients: A Randomized Controlled Trial. *JAMA, 284*(8), 963-971.

Keller, M. B., McCullough, J. P., Klein, D. N., Arnow, B., Dunner, D. L., Gelenberg, A. J., Markowitz, J. C., Nemeroff, C. B., Russell, J. M., Thase, M. E., Trivedi, M. H., & Zajecka, J. (2000). A comparison of nefazodone, the cognitive behavioral-analysis system of psychotherapy, and their combination for the treatment of chronic depression. *New England Journal of Medicine, 342*(20), 1462-1470.

Kessler, R. C. (2000). Personal communication. Boston.

Khantzian, E. J. (1975). Self selection and progression in drug dependence. *Psychiatry Digest, 36*, 19-22.

Khantzian, E. J. (1985). The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence. *American Journal of Psychiatry, 142*(11), 1259-1264.

Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry, 4*(5), 231-244.

Khantzian, E. J., Halliday, K. S., & McAuliffe, W. E. (1990). *Addiction and the vulnerable self: modified dynamic group therapy for substance abusers*. New York: Guilford.

Kim, S. W., Grant, J. E., & Adson, D. E. (2001). Double-blind naltrexone and placebo comparison study In the treatment of pathological gambling. *Biological Psychiatry*.

Koller, K. M. (1972). Treatment of poker machine addicts by aversion therapy. *Medical Journal of Australia*(1), 742-745.

Korn, D. A. (2000). Expansion of gambling in Canada: implications for health and social policy. *Canadian Medical Association Journal, 163*(1), 61-64.

Korn, D. A. (2000, July - August). Fitness, Stress & Health: Making the Connection. *Fitness Business Canada, 1,* 32-35.

Korn, D. A., & Shaffer, H. J. (1999a). *Gambling and the health of the public: adopting a public health perspective*. Boston: Harvard Medical School.

Korn, D. A., & Shaffer, H. J. (1999b). Gambling and the health of the public: adopting a public health perspective. *Journal of Gambling Studies, 15*(4), 289-365.

Korn, D. A., & Skinner, H. A. (2000, Autumn 2000). Gambling expansion in Canada: an emerging public health issue. *CPHA Health Digest, XXIV,* 10.

Kuhn, T. S. (1970). *The structure of scientific revolutions* (Second ed.). Chicago: University of Chicago Press.

Ladouceur, R., Boisvert, J. M., & Dumont. (1994). Cognitive-behavioral treatment for adolescent pathological gamblers. *Behavioral Modification, 18*, 230-242.

Ladouceur, R., Jacques, C., Ferland, F., & Giroux, I. (1999). Prevalence of problem gambling: A replication study 7 years later. *Canadian Journal of Psychiatry, 44*(8), 802-804.

Ladouceur, R., Jacques, C., Giroux, I., Ferland, F., & Leblond, J. (2000). Analysis of a casino's self-exclusion program. *Journal of Gambling Studies, 16*(4), 453-460.

Ladouceur, R., Paquet, C., & Dube, D. (1996). Erroneous perceptions in generating sequences of random events. *Journal of Applied Social Psychology, 26*(24), 2157-2166.

Ladouceur, R., Sylvain, C., Boutin, C., & Doucet, C. (2002). *Understanding and treating the pathological gambler*. West Sussex, England: John Wiley & Sons, Ltd.

Ladouceur, R., Sylvain, C., Letarte, H., Giroux, I., & Jacques, C. (1998). Cognitive treatment of pathological gamblers. *Behaviour Research & Therapy, 36*(12), 1111-1119.

Ladouceur, R., & Walker, M. (1998). The cognitive approach to understanding and treating pathological gambling. In M. Hersen (Ed.), *Comprehensive Clinical Psychology* (pp. 588-601). New York: Pergamon.

Langenbucher, J., Bavly, L., Labouvie, E., Sanjuan, P. M., & Martin, C. S. (2001). Clinical features of pathological gambling in an addictions treatment cohort. *Psychology of Addictive Behaviors, 15*(1), 77-79.

Lapage, C., Ladouceur, R., & Jacques, C. (2000). Prevalence of problem gambling among community service users. *Community Mental Health Journal, 36*(6), 597-601.

Lee, M. Y. (1997). A study of solution-focussed brief family therapy: outcomes and issues. *American Journal of Family Therapy, 25*, 17.

Leshner, A. (1999). Science-based views of drug addiction and its treatment. *Journal of the American Medical Association, 282*(14), 1314-1316.

Lesieur, H. R., & Blume, S., B. (1990). Characteristics of pathological gamblers identified among patients on a psychiatric admissions service. *Hospital and Community Psychiatry, 41*, 1009-1012.

Lesieur, H. R., & Blume, S. B. (1987). The South Oaks gambling screen (SOGS): A new instrument for the identification of pathological gamblers. *American Journal of Psychiatry, 144*(9), 1184-1188.

Lesieur, H. R., Blume, S. B., & Zoppa, R. M. (1986). Alcoholism, drug abuse, and gambling. *Alcoholism: Clinical & Experimental Research, 10*(1), 33-38.

Levin, J. D. (1987). *Treatment of alcoholism and other addictions*. Northvale, N.J.: Jason Aronson Inc.

Levine, H. G. (1978). The discovery of addiction: changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol, 39*, 143-174.

Littman-Sharp, N., Turner, N., Stirpe, T., & Liu, E. (1999, April 1999). *The Inventory of Gambling Situations: A newly revised instrument for the identification of problem gamblers' high risk situations.* Paper presented at the Canadian Foundation on Compulsive Gambling Annual Conference, Ottawa.

Maltsberger, J. T., & Buie, D. (1974). Countertransference hate in the treatment of suicidal patients. *Archives of General Psychiatry, 30*, 625-633.

Marlatt, G. A. (Ed.). (1998). *Harm Reduction: Pragmatic Strategies for Managing High-Risk Behaviors*. New York: Guilford.

Marlatt, G. A., Baer, J. S., Donovan, D. M., & Kivlahan, D. R. (1988). Addictive behaviors: etiology and treatment. *Annual Review of Psychology, 39*, 223-252.

Marlatt, G. A., & Gordon, J. (Eds.). (1985). *Relapse prevention*. New York: Guilford.

Massachusetts Council on Compulsive Gambling, The Massachusetts Department of Public Health, & The Division on Addictions at Harvard Medical School. (2001). *The results of a national think tank on state-funded gambling treatment programs: a Massachusetts initiative*. Boston: Massachu-

setts Council on Compulsive Gambling, The Massachusetts Department of Public Health and The Division on Addictions at Harvard Medical School.

McAulliffe, W. E., & Ch'ien, J. M. N. (1986). Recovery training and self help: A relapse-prevention program for treated opiate addicts. *Journal of Substance Abuse Treatment, 3*, 9-20.

McConaghy, N., Armstrong, M., Blaszczynski, A., & Allcock, C. (1983). Controlled comparison of aversion therapy and imaginal desensitization in compulsive gambling. *British Journal of Psychiatry, 142*, 366-372.

McConaghy, N., Armstrong, M. S., Blaszczynski, A., & Allcock, C. (1988). Behavioral Completion Versus Stimulus Control in Compulsive Gambling. *Behavioral Modification, 12*(3), 371-384.

McConaghy, N., Blaszczynski, A., & Frankova, A. (1991). Comparison of Imaginal Desentisation with other Behavioral Treatments of Pathological Gambling: A Two to Nine Year Follow-up. *British Journal of Psychiatry, 159*, 390-392.

McNeilly, D. P., & Burke, W. J. (2000). Late life gambling: The attitudes and behaviors of older adults. *Journal of Gambling Studies, 16*(4), 393-415.

Menninger, K. (1963). *The vital balance: the life process in mental health and illness*. New York: Viking Press.

Miller, W. R. (2000). Rediscovering fire: small interventions, large effects. *Psychology of Addictive Behaviors, 14*(1), 6-18.

Miller, W. R., Brown, J. M., Simpson, T. L., Handmaker, N. S., Bein, T. H., Luckie, L. F., Montgomery, H. A., Hester, R. K., & Tonigan, J. S. (1995). What works? A methodological analysis of the alcohol treatment outcome literature. In W. R. Miller (Ed.), *Handbook of alcoholism treatment approaches: effective alternatives* (Second ed., pp. 12-44). Boston: Allyn and Bacon.

Miller, W. R., & Rollnick, S. (Eds.). (1991). *Motivational interviewing: preparing people to change addictive behavior*. New York: Guilford Press.

Mojtabai, R., Olfson, M., & Mechanic, D. (2002). Perceived need and help-seeking in adults with mood, anxiety, or substance use disorders. *Archives of General Psychiatry, 59*(1), 77-84.

Monti, P. M., Abrams, D. B., Kadden, R., & Cooney, N. (1989). *Treating Alcohol Dependence: A Coping Skills Therapy Guide*. New York: Guildford Press.

Montori, V. M., & Guyatt, G. H. (2001). Intention-to-treat principle. *Canadian Medical Association Journal, 165*(10), 1339-1341.

Moreno, I., Saiz-Ruiz, J. Y., & Lopez-Ibor, J. J. (1991). Serotonin and gambling dependence. *Human Psychopharmacology, 6*, 6-9.

Moskowitz, J. (1980). Lithium and lady luck: Use of lithium carbonate in compulsive gambling. *New York State Journal of Medicine, 89*, 785-788.

Nathan, P. E. (1998). Practice guidelines: not yet ideal. *American Psychologist, 53*(3), 290-299.

National Endowment for Financial Education, & National Council on Problem Gambling. (2000). *Personal financial strategies for the loved ones of problem gamblers*: National Endowment for Financial Education.

National Gambling Impact Study Commission. (1999). *National Gambling Impact Study Commission Report*. Washington, D.C.: National Gambling Impact Study Commission.

National Institute of Drug Abuse. (1998). *A Cognitive-Behavioral Approach: Treating Cocaine Addiction* (93-4308). Rockville, Maryland: National Institutes of Health.

National Institute on Drug Abuse. (1999). *Principles of Drug Addiction Treatment: A Research-Based Guide* (99-4180). Rochville, Maryland: National Institutes of Health.

National Instituted on Alcohol Abuse and Alcoholism. (1995). *Cognitive-behavioral coping skills therapy manual* (Project MATCH Mongraph 94-3725). Rochville, Maryland: National Institutes of Health.

National Research Council. (1999). *Pathological gambling: a critical review*. Washington D.C.: National Academy Press.

National Steering Committee. (1999). *First Nations and Inuit Regional Health Survey*. St. Regis, Quebec: First Nations and Inuit Regional Health Survey.

Oakey-Browne, M. A., Adams, P., & Mobberley, P. M. (2001). Interventions for pathological gambling (Cochrane Review), *The Cochrane Library* (pp. 23): Oxford: Update Software.

Office of Public Health. (1999). *Trends in Indian Health*. Rochville, Maryland: Indian Health Services.

Oh, H., & Hsu, C. H. C. (2001). Volitional degrees of gambling behaviors. *Annals of Tourism Research, 28*(3), 618-637.

O'Malley, S. S., Jaffe, A. J., Chang, G., Schottenfeld, R. S., Meyer, R. E., & Rounsaville, B. J. (1992). Naltrexone and coping skills therapy for alcohol dependence: a controlled study. *Archives of General Psychiatry, 49*(11), 881-887.

Orford, J. (1985). *Excessive appetites: a psychological view of addictions*. New York: John Wiley & Sons.

Pasternak, A. V., & Fleming, M. F. (1999). Prevalence of gambling disorders in a primary care setting. *Archives of Family Medicine, 8*(Nov/Dec), 515-520.

Perry, S., Cooper, A. M., & Michels, R. (1987). The psychodynamic formulation: Its purpose, structure, and clinical application. *American Journal of Psychiatry, 144*, 543-550.

Petry, N. M. (2000a). Gambling problems in substance abusers are associated with increased sexual risk behaviors. *Addiction, 95*(7), 1089-1100.

Petry, N. M. (2000b). Psychiatric symptoms in problem gambling and non-problem gambling substance abusers. *American Journal of Addictions, 9*, 163-171.

Polanyi, M. (1967). *The tacit dimension*. New York: Doubleday.

Prochaska, J. O. (1996, May 6). *A transtheoretical approach to addiction treatment: considering stages of change to optimize treatment outcomes*. Paper presented at the Drugs and Addictions Treatment Briefing, Harvard University.

Prochaska, J. O., DiClemente, C.C., & Norcross, J.C. (1992). In search of how people change: applications to addictive behaviors. *American Psychologist, 47*, 1102-1114.

Prochaska, J. O., Norcross, J. C., & DiClemente, C. C. (1994). *Changing for good: a revolutionary six-stage program for overcoming bad habits and moving your life positively forward*. New York: Avon.

Project Match Research Group. (1997). Matching alcoholism treatment to client heterogeneity: project MATCH posttreatment drinking outcomes. *Journal of Studies on Alcohol, 58*, 7-29.

Quinn, J. P. (1891). *Fools of fortune*. Chicago: The Anti-Gambling Association.

Rollnick, S., & Morgan, M. (1995). Motivational interviewing: increasing readiness for change. In A. M. Washton (Ed.), *Psychotherapy and Substance Abuse: A Practitioner's Handbook* (pp. 179-191). New York: Guilford.

Rosenthal, R. J. (1997). The psychodynamics of pathological gambling: a review of the literature. In D. L. Yalisove (Ed.), *Essential Papers on Addiction* (pp. 184-212). New York: New York University Press.

Rosenthal, R. J., & Rugle, L. J. (1994). A psychodynamic approach to the treatment of pathological gambling: I. Achieving abstinence. *Journal of Gambling Studies, 10*(1), 21-42.

Rugle, L. (2000, December 3-5). *The use of olanzapine in the treatment of video poker pathological gamblers.* Paper presented at the The Comorbidity of Pathological Gambling: A Current Research Synthesis, Las Vegas.

Sachs, M. L., & Buffone, G. W. (Eds.). (1984). *Running as Therapy: An Integrated Approach*. Lincoln: University of Nebraska Press.

Sackett, D. I., Rosenberg, W. M., Grey, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence-based medicine: what it is and what it isn't. *British Medical Journal, 312*, 71-72.

Sackett, D. I., Strauss, S. E., Richardson, W. S., & Haynes, R. B. (2000). *Evidence-based medicine. How to practice and reach EBM* (2nd ed.). London, England: Churchill Livingston.

Sartin, H. G. (1988). WIN therapy: an alternative diagnostic and treatment procedure for problem gamblers. In W. R. Eadington (Ed.), *Gambling Research. Proceedings of the 7th International Conference on Gam-*

bling and Risk Taking. (Vol. 5: Research on Pathological Gambling, pp. 365-391). Reno: University of Nevada.

Schon, D. A. (1983). *The reflective practitioner*. New York: Basic Books.

Seager, C. P. (1970). Treatment of compulsive gamblers by electrical aversion. *British Journal of Psychiatry, 117*, 545-553.

Shaffer, H. J. (1986a). Assessment of addictive disorders: The use of clinical reflection and hypotheses testing. *Psychiatric Clinics of North America, 9*(3), 385-398.

Shaffer, H. J. (1986b). Conceptual crises and the addictions: a philosophy of science perspective. *Journal of Substance Abuse Treatment, 3*, 285-296.

Shaffer, H. J. (1991). Toward an epistemology of "addictive disease". *Behavioral Sciences & the Law, 9*(3), 269-286.

Shaffer, H. J. (1992). The psychology of stage change: the transition from addiction to recovery. In J. G. Langrod (Ed.), *Substance abuse: a comprehensive textbook* (Second ed., pp. 100-105). Baltimore: Williams & Wilkins.

Shaffer, H. J. (1994). Denial, ambivalence and countertransference hate. In R. Weiss (Ed.), *Alcoholism: Dynamics and Treatment* (pp. 421-437). Northdale, N.J.: Jason Aronson.

Shaffer, H. J. (1997). The psychology of stage change. In J. G. Langrod (Ed.), *Substance abuse: a comprehensive textbook* (Third ed., pp. 100-106). Baltimore: Williams & Wilkins.

Shaffer, H. J., & Freed, C. R. (in press). The assessment of gambling related disorders. In G. A. Marlatt (Ed.), *Assessment of Addictive Behaviors* (second ed.). New York: Guilford.

Shaffer, H. J., Freed, C. R., & Healea, D. (under review). Gambling Disorders Among a Cohort of Homeless Substance Abusing Treatment Seekers.

Shaffer, H. J., & Gambino, B. (1979). Addiction paradigms II: theory, research, and practice. *Journal of Psychedelic Drugs, 11*, 299-304.

Shaffer, H. J., & Hall, M. N. (1996). Estimating the prevalence of adolescent gambling disorders: a quantitative synthesis and guide toward standard gambling nomenclature. *Journal of Gambling Studies, 12*(2), 193-214.

Shaffer, H. J., & Hall, M. N. (2001). Updating and refining meta-analytic prevalence estimates of disordered gambling behavior in the United States and Canada. *Canadian Journal of Public Health, 92*(3), 168-172.

Shaffer, H. J., & Hall, M. N. (2002). Longitudinal patterns of gambling and drinking problems among casino employees. *Journal of Social Psychology, 142*(4), 405-424.

Shaffer, H. J., & Hall, M. N. (in press). Longitudinal patterns of gambling and drinking problems among casino employees. *Journal of Social Psychology*.

Shaffer, H. J., Hall, M. N., & Vander Bilt, J. (1997a). *Estimating the prevalence of disordered gambling behavior in the United States and Canada: a meta-analysis*. Boston: Presidents and Fellows of Harvard College.

Shaffer, H. J., Hall, M. N., & Vander Bilt, J. (1997b). *Program Evaluation: A Practical Guide to Discovering What Works* [On-line]. Harvard University and Brown University. Retrieved October 14, 1999, 1999, from the World Wide Web: http://www.hms.harvard.edu/doa/evaluationguide.html

Shaffer, H. J., Hall, M. N., & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: a research synthesis. *American Journal of Public Health, 89*, 1369-1376.

Shaffer, H. J., Hall, M. N., Vander Bilt, J., & George, E. (Eds.). (in press). *Youth, gambling & society: futures at stake*. Reno: University of Nevada Press.

Shaffer, H. J., & Jones, S. B. (1989). *Quitting cocaine: the struggle against impulse*. Lexington, MA.: Lexington Books.

Shaffer, H. J., & Korn, D. A. (2002). Gambling and related mental disorders: a public health analysis, *Annual Review of Public Health* (Vol. 23, pp. 171-212). Palo Alto: Annual Reviews, Inc.

Shaffer, H. J., LaBrie, R., & LaPlante, D. (2002). *Quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health*

toxin.Unpublished manuscript, Manuscript sumitted for publication.
Shaffer, H. J., LaBrie, R., Scanlan, K. M., & Cummings, T. N. (1994). Pathological gambling among adolescents: Massachusetts gambling screen (MAGS). *Journal of Gambling Studies, 10*(4), 339-362.
Shaffer, H. J., & LaPlante, D. (in press). The treatment of gambling related disorders. In D. M. Donovan (Ed.), *Relapse Prevention* (second ed.). New York: Guilford.
Shaffer, H. J., & Robbins, M. (1991). Manufacturing multiple meanings of addiction: time-limited realities. *Contemporary Family Therapy, 13*, 387-404.
Shaffer, H. J., & Robbins, M. (1995). Psychotherapy for addictive behavior: a stage-change approach to meaning making. In A. M. Washton (Ed.), *Psychotherapy and Substance Abuse: A Practitioner's Handbook* (pp. 103-123). New York: Guilford.
Shaffer, H. J., & Simoneau, G. (2001). Reducing resistance and denial by exercising ambivalence during the treatment of addiction. *Journal of Substance Abuse Treatment, 20*(1), 99-105.
Shaffer, H. J., Vander Bilt, J., & Hall, M. N. (1999). Gambling, drinking, smoking and other health risk activities among casino employees. *American Journal of Industrial Medicine, 36*(3), 365-378.
Shaffer, H. J., & Zinberg, N. E. (1985). The social psychology of intoxicant use: the natural history of social settings and social control. *Bulletin of the Society of Psychologists in the Addictive Behaviors, 4*, 49-55.
Siever, L. J. (1987). Role of noradrenergic mechanisms in the etiology of the affective disorders. In H. Y. Meltzer (Ed.), *Psychopharmacology: Third Generation of Progress* (pp. 493-504). New York: Raven Press.
Silver, J. S., & Shaffer, H. J. (1996). Change intolerance to shifts in methadone formulation: a preliminary investigation. *Journal of Substance Abuse Treatment, 13*(4), 331-339.
Single, E., Conley, P., Hewitt, D., Mitic, W., Poulin, C., Reiley, D., Room, R., Sawka, E., & Topp, J. (1996). *Harm Reduction: Concepts and Practice* (Policy Discussion Paper). Ottawa: Canadian Centre on Substance Abuse.
Skinner, H. A. (1999). Gambling: achieving the right balance. *Journal of Gambling Studies, 15*(4), 285-287.
Skinner, H. A. (2001). *Promoting health through organizational change*. San Francisco CA: Benjamin Cummings.
Slutske, W. S., Eisen, S., True, W. R., Lyons, M. J., Goldberg, J., & Tsuang, M. (2000). Common genetic vulnerability for pathological gambling and alcohol dependence in men. *Archives of General Psychiatry, 57*(7), 666-673.
Stewart, R. M., & Brown, R., I. F. (1988). An outcome study of Gamblers Anonymous. *British Journal of Psychiatry, 152*, 284-288.
Sylvain, C., Ladouceur, R., & Boisvert, J. (1997). Cognitive and Behavioral Treatment of Pathological Gambling: A Controlled Study. *Journal of Consulting and Clinical Psychology, 65*(5), 727-732.
Taber, J. I. (1985). Pathological gambling: the initial screening interview. *Journal of Gambling Studies, 1*(1), 23-34.
Tavares, H., Zilberman, M. L., Beites, F. J., & Gentil, V. (2001). Gender differences in gambling progression. *Journal of Gambling Studies, 17*(2), 151-159.
Topp, J., Sawka, E., Room, R., Poulin, C., Single, E., & Thompson, H. (1998). *Policy Discussion Paper on Problem Gambling*. Ottawa: Canadian Centre on Substance Abuse.
U.S. Preventive Services Task Force. (1996). *Guide to Clinical Preventive Services* (2nd ed.). Baltimore: Williams and Wilkins.
United States Census Bureau. (2002). Retrieved June, 2002, from the World Wide Web: http://www.census.gov
United States Department of Health and Human Services. (1996). *Physical Activity and Health: A Report of the Surgeon General*. Atlanta: U. S. Department of Health and Human Services.
Vaillant, G. E. (1983). *The natural history of alcoholism: causes, patterns, and paths to recovery*. Cambridge: Harvard University Press.
Vaillant, G. E. (1990). Elements of recovery: a longitudinal analysis. In L. I. Sederer (Ed.),

Treatment Choices for Alcoholism and Substance Abuse (pp. 201-215). Lexington, MA: Lexington Books.

Vander Bilt, J., Hall, M. N., Shaffer, H. J., & Higgins-Biddle, J. C. (1997). Assessing substance abuse treatment provider training needs: screening skills. *Journal of Substance Abuse Treatment, 14*(2), 163-171.

Vander Bilt, J., Hall, M. N., Shaffer, H. J., Storti, S., & Church, O. (1997a). An assessment of substance abuse treatment training needs among nurses (part I): evaluating skill, knowledge, and training characteristics. *Journal of Substance Misuse for Nursing, Health and Social Care, 2*(3), 150-157.

Vander Bilt, J., Hall, M. N., Shaffer, H. J., Storti, S., & Church, O. (1997b). An assessment of substance abuse treatment training needs among nurses (part II): applying an index of training needs. *Journal of Substance Misuse for Nursing, Health and Social Care, 2*(4), 184-190.

Vogt, D. D., & Montagne, M. (1982). Absinthe: behind the emerald mask. *The International Journal of the Addictions, 17*(6), 1015-1029.

Volberg, R. A. (2000). The future of gambling in the United Kingdom: increasing access creates more problem gamblers. *BMJ, 320*(7249), 1556.

Walitzer, K. S., Dermen, K. H., & Connors, G. J. (1999). Strategies for preparing clients for treatment. A review. *Behavior Modification, 23*(1), 129-151.

Wardman, D., el-Guebaly, N., & Hodgins, D. (2001). Problem and pathological gambling in North American Aboriginal populations: a review of the empirical literature. *Journal of Gambling Studies, 17*, 81-1000.

Weiner, I. B. (1975). *Principles of Psychotherapy*. New York: John Wiley & Sons, Inc.

Weston, W., W,. (2001). Informed and shared decision-making: the crux of patient-centred care. *Canadian Medical Association Journal, 165*(4), 438-439.

Westphal, J. R., Rush, J. A., & Stevens, L. (1998, August 14). *Problem and pathological gambling behaviors within specific populations in the state of Indiana* [on-line]. Indiana Department of Administration and Family and Social Services Administration. Retrieved April 11, 2001, from the World Wide Web: http://www.state.in.us/fssa/servicemental/gambling/pathological.html

Winters, K. C., Stinchfield, R., & Fulkerson, J. (1993). Toward the devleopment of an adolescent gambling problem severity scale. *Journal of Gambling Studies, 9*, 371-386.

World Health Organization. (1984). *Report of the Working Group on the Concepts and Principles of Health Promotion.* Copenhagen: WHO Regional Office for Europe.

World Health Organization. (1986). Health promotion: a discussion document on the concepts and priniciples. *Health Promotion, 1*(1), 73-76.

Zinberg, N. E. (1974). High states: a beginning study, *Drug Abuse Council Publication No. SS-3*. Washington, D.C.: The Drug Abuse Council, Inc.

Zinberg, N. E. (1975). Addiction and ego function. *Psychoanalytic Study of The Child, 30*, 567-588.

Zinberg, N. E., & Fraser, K. M. (1979). The role of the social setting in the prevention and treatment of alcoholism. In N. Mello (Ed.), *The Diagnosis & Treatment of Alcoholism* (pp. 359-385). New York: McGraw-Hill Book Company.

Zinberg, N. E., & Shaffer, H. J. (1985). The social psychology of intoxicant use: the interaction of personality and social setting. In H. J. Shaffer (Ed.), *The Addictions: Multidisciplinary Perspectives and Treatments*. Lexington, MA: Lexington Books.

Zinberg, N. E., & Shaffer, H. J. (1990). Essential factors of a rational policy on intoxicant use. *Journal of Drug Issues, 20*(4), 619-627.