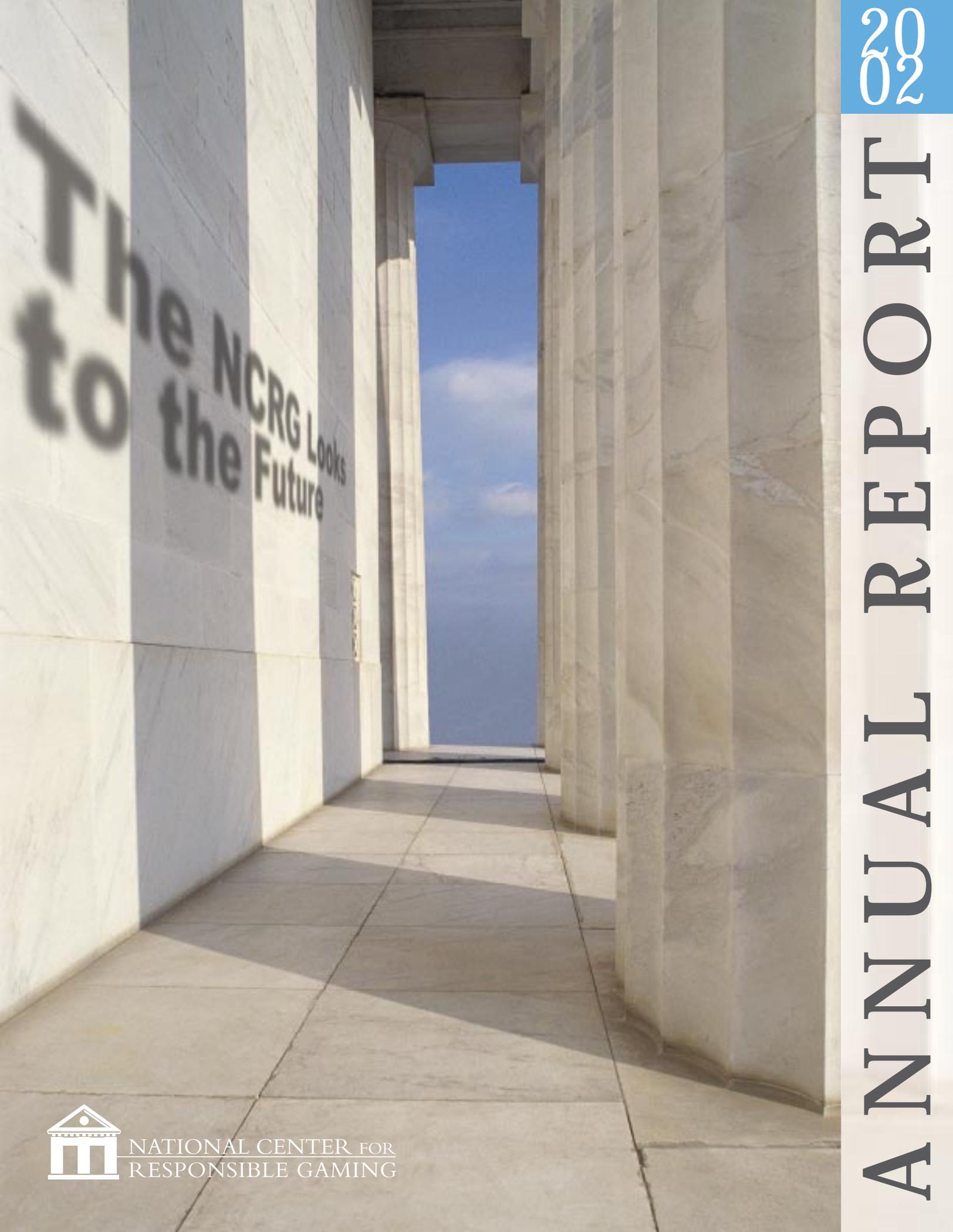


2022

ANNUAL REPORT



NATIONAL CENTER FOR
RESPONSIBLE GAMING

PAGE 1	MESSAGE FROM THE CHAIRMAN
PAGE 2	NCRG STRUCTURE AND PROGRAMS
PAGE 3	NCRG BOARD OF DIRECTORS
PAGE 4	NCRG CONTRIBUTORS
	<ul style="list-style-type: none">• 1996 – 2002• 2002 JCM-AGA Golf Classic• 2002 AGA Awards Dinner Honoring America’s Gaming Greats
PAGE 6	RESEARCH
	<ul style="list-style-type: none">• Institute for Research on Pathological Gambling and Related Disorders, Harvard Medical School’s Division on Addictions• NCRG-Funded Research in Print
PAGE 13	EDUCATION
	<ul style="list-style-type: none">• Annual Conference• Programs• Educational Resources• Youth Initiatives• Events and Presentations
PAGE 16	THE NCRG LOOKS TO THE FUTURE
PAGE 18	FINANCIAL STATEMENTS JAN. 1, 2002 – DEC. 31, 2002

OUR MISSION



Founded in 1996, the National Center for Responsible Gaming (NCRG) was the first national organization exclusively devoted to funding scientific research on pathological and youth gambling.

The NCRG's mission is to be the leading source of science-based research and information on gambling and health, advancing education, prevention, treatment and public policy.

With each year that passes, the National Center for Responsible Gaming (NCRG) marks its many accomplishments, while continually striving to set new goals for the future. The year 2002 was particularly important for the NCRG in this regard, as the organization closely examined its myriad of successes in research and education and set its sights on new challenges for the future.



In its seventh year, the NCRG continued to support only the highest-quality scientific research on disordered gambling through the Institute for Research on Pathological Gambling and Related Disorders at Harvard Medical School's Division on Addictions. In 2002, the Institute awarded three external grants, totaling \$505,410, to the Yale School of Medicine, Boston University and the University of Minnesota for new research projects. The Institute was also extremely busy with six internal gambling research projects on topics ranging from vulnerable population segments to the study of gaming regulations from a public health perspective. Additionally, the findings from several existing NCRG-funded studies were unveiled in 2002 and published in a number of peer-reviewed academic journals, including *Addictive Behaviors*, *Journal of Social Psychology*, *Journal of General Internal Medicine* and *Psychiatric Annals*, among others.

On the education front, in 2002 the NCRG held its third annual conference in Las Vegas, "Rethinking Addiction: How Gambling and Other Behavioral Disorders are Changing the Concept and Treatment of Alcohol and Substance Use Disorders," which attracted a record number of attendees. More than 300 addictions researchers, treatment providers, public health policy-makers and gaming industry executives gathered to share insights into how new studies of problem gambling and behavioral disorders are expanding general theories about all addictions, including substance abuse.

In 2002, the NCRG had its first annual "Scientific Achievement Awards" program to

formally honor individuals who have made exceptional scientific contributions to the field of gambling research. At its inaugural event, the NCRG honored two outstanding individuals for their scientific accomplishments in this new and emerging field.

To strengthen its educational outreach, the NCRG completed a major upgrade of its Web site in 2002, which now offers brand new features and is a

highly informative, user-friendly resource.

In looking to the future, the NCRG board of directors made several important decisions in 2002. The board approved a new mission for the NCRG, starting in 2003. Among other things, the new mission will encompass an extended research agenda to include more practical initiatives, as well as increased educational activities that will expand to new and broader audiences.

The start of 2003 will also mark the beginning of new funding commitments for the NCRG, to ensure that its new goals can be met financially.

And finally, this year marked the end of a personal journey for me as NCRG chairman. As my term came to an end in 2002, Dennis Eckart, a former member of the U.S. House of Representatives, was elected to take over this position and start the NCRG on its new and expanded course for the future.

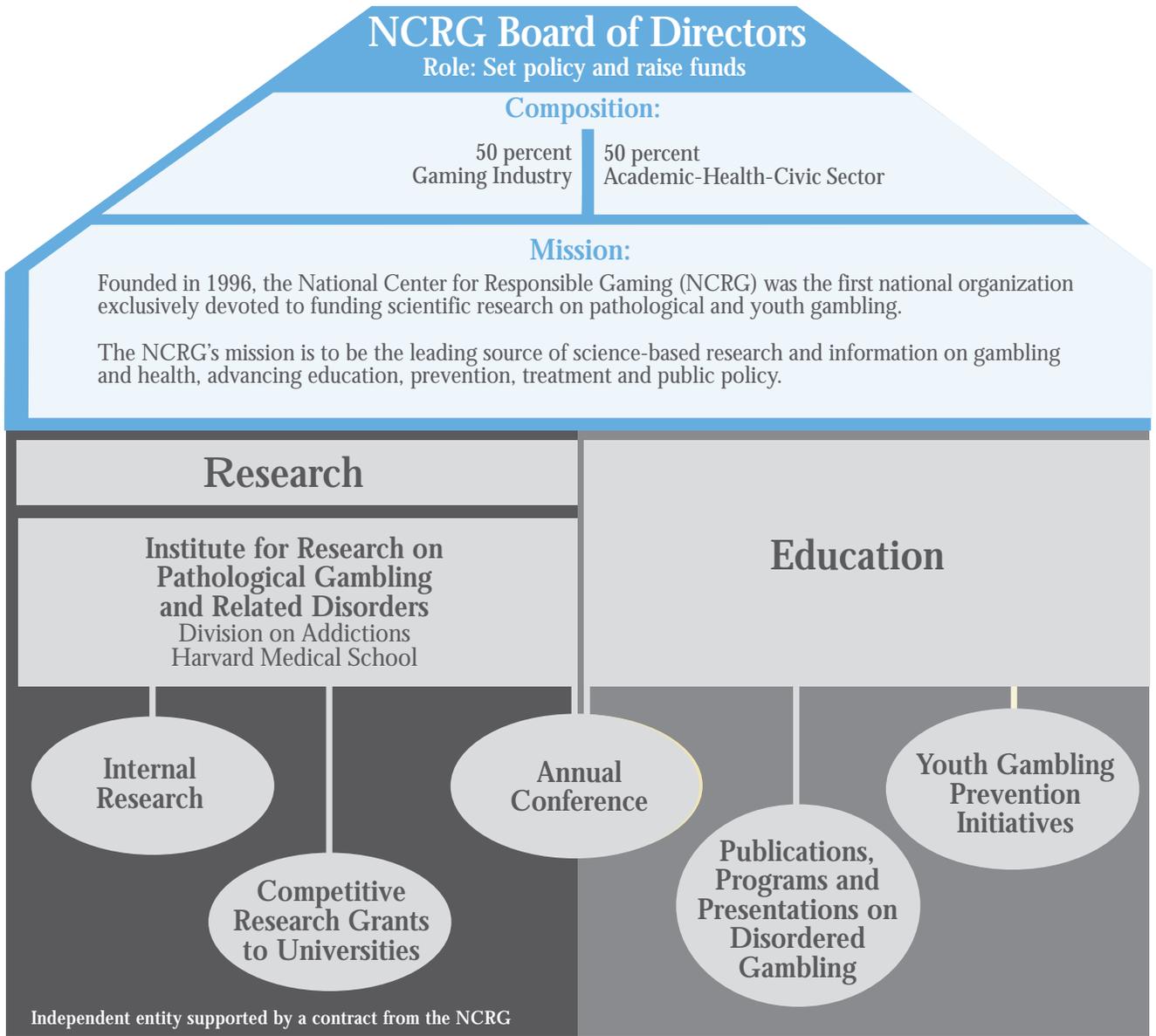
It's been a true honor serving as the NCRG chairman since the organization's inception in 1996. I've had the privilege of seeing the NCRG take root and make a highly reputable name for itself in the area of disordered gambling research and education. I will continue to serve as a board member and look forward to being part of the many invigorating challenges ahead.

Sincerely,

A handwritten signature in blue ink, appearing to read "Paul A. Harvey".

Maj. Gen. Paul A. Harvey (Ret.)
Chairman

NCRG STRUCTURE AND PROGRAMS



For more information on gambling research and the annual conference, contact:
 Christine Reilly, Executive Director
 Institute for Research on Pathological Gambling and Related Disorders
 Division on Addictions
 Harvard Medical School
 350 Longwood Avenue, Suite 200
 Boston, MA 02115
 Tel: 617-432-0297
 Fax: 617-432-0057
 Email: Christine_Reilly@hms.harvard.edu
 www.hms.harvard.edu/doa/institute

For more information about the NCRG:
 P.O. Box 14323
 Washington, DC 20044-4323
 Email: contact@ncrg.org
 www.ncrg.org

The National Center for Responsible Gaming (NCRG) is a tax-exempt, nonprofit organization founded in 1996 to address pathological and youth gambling through research and public education. The board of directors' membership is balanced between representatives of the gaming industry and leaders from the civic, charitable, educational, community, and public service sectors.

The following individuals currently serve on the board of directors:

OFFICERS

Dennis E. Eckart, Chairman
(elected December 2002)
President and CEO
Greater Cleveland Growth Association

William Boyd, President
Chairman and CEO
Boyd Gaming Corporation

Judy L. Patterson, Secretary and Treasurer
Senior Vice President and Executive Director
American Gaming Association

BOARD OF DIRECTORS

Thomas Baker
President and CEO
International Game Technology

Robert Boswell
Senior Vice President
Pioneer Behavioral Health

Thomas J. Brosig

Roland W. Burris
Of Counsel
The Peters Law Firm

Glenn Christenson
Executive Vice President,
CFO and CAO
Station Casinos, Inc.

Sue Cox
Founding Executive Director
Texas Council on Problem and
Compulsive Gambling

Frank J. Fahrenkopf, Jr.
President and CEO
American Gaming Association

Alan Feldman
Senior Vice President,
Public Affairs
MGM MIRAGE™

Maj. Gen. Paul A. Harvey
President/Owner
PDH Associates
Former NCRG chairman,
1996-2002

John M. Galloway
President and COO
Isle of Capri Casinos, Inc.

David A. Korn, M.D.
Assistant Professor
Department of Public
Health Sciences
University of Toronto

Phillip Martin
Tribal Chief
Mississippi Band of
Choctaw Indians

Brian McKay
Of Counsel
Lionel Sawyer & Collins

Kevin P. Mullally
Executive Director
Missouri Gaming Commission

Carol O'Hare
Executive Director
Nevada Council on
Problem Gambling

James B. Perry
President and CEO
Argosy Gaming Company

Philip G. Satre
Chairman
Harrah's Entertainment, Inc.

Glenn Schaeffer
President, CFO and Treasurer
Mandalay Resort Group

Howard J. Shaffer, Ph.D.
Director, Division on Addictions
Harvard Medical School

The National Center for Responsible Gaming (NCRG) has received generous support from various financial donors, including gaming companies, suppliers and vendors, NCRG board members, gaming employees and nongaming individuals.

FOUNDING CONTRIBUTOR

Boyd Gaming Corporation provided the start-up funds for the NCRG in 1996 and made a 10-year pledge of \$875,000 between 1997 and 2006.

CONTRIBUTORS 1997 – 2002

\$1,350,000*

Park Place Entertainment Corporation/
Grand Casinos, Inc./
Hilton Hotels Corporation/
Caesars World, Inc.

\$875,000

Boyd Gaming Corporation
(10-year pledge)

\$600,000

International Game Technology
The Lincy Foundation
Mandalay Resort Group
MGM MIRAGE™

\$585,000**

Harrah's Entertainment, Inc./Harveys
Casino Resorts/
Rio All-Suite Hotel & Casino/
Showboat, Inc.

\$300,000

Aztar Corporation

\$100,000-\$299,000

Coast Resorts, Inc.
Hollywood Casino Corporation
Hotel Employees & Restaurant
Employees International Union
Isle of Capri Casinos, Inc.
Pinnacle Entertainment, Inc.
Station Casinos, Inc.

\$50,000-\$99,000

Alliance Gaming Corporation
Argosy Gaming Company
Casino Data Systems
Empress Riverboat Casinos, Inc.
Horseshoe Gaming, Inc.
JCM American Corporation
Mississippi Band of Choctaw Indians
Shuffle Master Gaming

\$10,000-\$49,000

Foxwoods Resort Casino
Mission Industries
Mohegan Sun
The Riviera Hotel & Casino
Sandia Casino
Sky City Casino, Pueblo of Acoma
Southern Wine & Spirits of Nevada

*Park Place Entertainment Corporation was formed when Hilton Hotels Corporation acquired Grand Casinos, Inc., and Caesars World, Inc. The contribution listed above reflects previous grants and commitments made by these companies.

**The amount reflects donations by Rio All-Suite Hotel & Casino and Showboat, Inc., which were acquired by Harrah's Entertainment, Inc., in 1998.

2002 JCM-AGA GOLF CLASSIC

JCM American Corporation and the American Gaming Association (AGA) sponsored the fourth annual JCM-AGA Golf Classic May 13, 2002 at the Revere in Henderson, Nev. The event raised a record \$65,000 for the NCRG in support of scientific research and education on disordered gambling.

The sold-out tournament included 29 corporate sponsors and a full playing field of 148 players from the gaming industry and related suppliers and vendors. The event also featured a live auction with golf merchandise and unique vintage wines from Southern Wine & Spirits of Nevada.

The following companies supported this event through sponsorship or participation:

AGEM	Global Cash Access	Monte Carlo
Alliance Gaming Corporation/Bally Gaming and Systems	Golf Augusta Pro Shops	Nike Golf Learning Centers
American Gaming & Electronics (AG&E)	Hamada of Japan	Reed Exhibitions/G2E
Argosy Gaming Company	Happ Controls	Revere @ Anthem
Aristocrat Technologies, Inc.	Hikam America, Inc.	Scenic Airlines
Atronic Americas	Hi-Tech Gaming	Shuffle Master Gaming
Chateau Julien Wine Estates	Ho Ho Ho Chinese Gourmet	Sigma Game Inc.
Coin Mechanisms Inc.	House of Blues/Mandalay Bay	Southern Wine & Spirits of Nevada
CoreStaff	International Game Technology (IGT)	Southwest Print Source
Desert Rose	Japanese Seafood Gourmet	The Stirling Club
Elemis Spa	Ocean Forest	Teplis Travel
Flower Peddler	Konami Gaming, Inc.	Uniglobe Dazey Travel
		Venetian
		WMS Gaming





Gladys Knight, Merv Griffin, Shannon Bybee and Frank J. Fahrenkopf, Jr.

2002 AGA AWARDS DINNER HONORING AMERICA'S GAMING GREATS*

The second annual American Gaming Association (AGA) Awards Dinner Honoring America's Gaming Greats was held Sept. 18, 2002, at Paris Las Vegas Hotel-Casino. All proceeds from the fund-raising event benefited the National Center for Responsible Gaming (NCRG). More than 600 people attended the dinner and evening of entertainment, and more than \$150,000 was raised for the NCRG to fund independent, peer-reviewed scientific research on disordered gambling.

The 2002 America's Gaming Greats dinner honored American icon Merv Griffin for lifetime achievement in entertainment and gaming, and UNLV professor Shannon Bybee received a special achievement award for responsible gaming. The following companies and individuals generously supported the event:

Gold Sponsors (\$7,000 and above)

- Bank of America Securities
- Harrah's Entertainment, Inc.
- International Game Technology (IGT)
- Isle of Capri Casinos, Inc.
- Park Place Entertainment Corporation
- PricewaterhouseCoopers
- Southern Wine & Spirits of Nevada

Silver Sponsors (\$4,000 and above)

- Agua Caliente Band of Cahuilla Indians
- Aristocrat Technologies, Inc.
- Argosy Gaming Company
- Boyd Gaming Corporation
- Marsh
- MGM MIRAGE™
- Reed Exhibitions
- San Manuel Band of Mission Indians

Sponsors (\$3,500)

- Alliance Gaming Corporation
- Bear, Stearns & Co. Inc.
- Coca-Cola USA Fountain
- Cooper Perskie April Niedelman
- Wagenheim & Levenson, P.A.
- Culinary Union/HEREIU
- Deloitte & Touche
- The Duberstein Group
- Foxwoods Resort Casino
- Fraser Trebilcock Davis & Dunlap
- GEM Communications
- Goldman, Sachs & Co.
- Houssels Family Foundation
- Hyatt Gaming Services LLC
- JCM American Corporation
- Jones Vargas
- Konami Gaming, Inc.
- Mandalay Resort Group
- Marnell Corrao Associates
- Riviera Hotel and Casino
- Sierra Design Group

- Sprint
- Station Casinos, Inc.
- Tropicana Resort & Casino
- University of Nevada-Las Vegas
- VSR Lock, Inc.
- Claudine Williams
- WMS Gaming, Inc.
- Wynn Resorts

Special Thanks to:

Park Place Entertainment Corporation and Southern Wine & Spirits of Nevada for their major support of this year's event.

** In 2001 and 2002, the name of this event was temporarily changed from Gaming Hall of Fame Charity Dinner and Induction Ceremony to the AGA Awards Dinner Honoring America's Gaming Greats.*



INSTITUTE FOR RESEARCH ON PATHOLOGICAL GAMBLING AND RELATED DISORDERS

The National Center for Responsible Gaming (NCRG) supports high quality research on gambling disorders through its funding of the Institute for Research on Pathological Gambling and Related Disorders, based at Harvard Medical School (HMS), the world's pre-eminent institution in medical research and education. A program of the HMS Division on Addictions (DOA), the Institute pursues a vigorous research program conducted by faculty at the DOA and other Harvard schools and affiliates. To expand and enrich the field of gambling studies, the Institute operates an extramural grants program that provides support on a competitive basis to non-Harvard institutions in support of rigorous research on pathological gambling. The following pages summarize significant developments in both the intramural and extramural research programs in 2002.

“Your First Step to Change”

In 2002, the Institute produced a research-based minimal intervention response for help seekers in collaboration with the Massachusetts Council on Compulsive Gambling (MCCG). “Your First Step to Change” is a self-help guide for individuals who are experiencing gambling-related problems but are unlikely or unable to get professional treatment. The development of the guide was funded by the Massachusetts Department of Public Health.

The Institute is now conducting a comparison of the new guide with traditional materials that have been sent to callers of the MCCG help line since its inception. The project will follow up with a randomized sample of callers to the MCCG help line. It should yield information about what materials callers find useful so that adjustments can optimize the utility of this information.

Vulnerable Populations

Studies have identified segments of the population with vulnerabilities that place them at increased risk for developing gambling-related problems, including low socio-economic groups, the elderly, college students and adults in treatment for mental disorders. The Institute's research agenda has been guided by the view that a better understanding is needed of the risk and protective factors that influence the transition from recreational to problem-related gambling in such groups.

College Alcohol and Gambling Study

Although studies have indicated a higher rate of disordered gambling among college students than the general adult population, few studies have focused on the nature of gambling on campuses. For this reason, the Institute has collaborated with Henry Weschler, Ph.D., to add gambling questions to the Harvard School of Public Health College Alcohol Study (CAS), an ongoing survey of more than 14,000 students at 120 four-year colleges in 40 states. The CAS examines key issues in college alcohol abuse, including the tradition of heavy drinking on college campuses, the role of fraternities, sororities and athletics, the relationship of state alcohol control measures and college policies to this behavior, and the role that easy access to alcohol and low prices play. The study also provides a continuing look at other high-risk behaviors among college students, including tobacco and illicit drug use, unsafe sex, violence and other behavioral, social, and health problems confronting today's American college students.

In 2002, Weschler and the Institute faculty began analyzing the data from the gambling component. They will focus on the nature of student gambling, comorbidity and relationships among gambling and alcohol and other drug use. The findings of this study will be published in 2003.



Faculty and staff who work on projects for the Institute for Research on Pathological Gambling and Related Disorders, from left to right: Howard J. Shaffer, Ph.D., C.A.S.; Debi LaPlante, Ph.D.; Richard LaBrie, Ed.D.; Christine Reilly, M.A.; Rachel Kidman; Tony Donato, M.P.P.; and Gabriel Caro.

Casino Employees

Casino employees represent a unique and important segment of the population, with full access and exposure to gambling compared to the general public. In 2002, the Institute faculty published “The natural history of gambling and drinking problems among casino employees” in the *Journal of Social Psychology*. This longitudinal study, led by Howard Shaffer, director of the HMS Division on Addictions and principal investigator for the Institute, gathered data from a sample of 1,176 at three observation points approximately 12 months apart. Among the casino employees with gambling and drinking problems, a segment displayed the capacity to diminish those problems, even when the difficulties had reached disordered levels. This finding suggests that more fluctuation is associated with gambling and drinking problems than previously thought, and that the conventional wisdom about disordered gambling as “always progressive” needs reconsideration.

Patients with Schizophrenia

The Institute awarded a competitive grant of \$172,477 to the Yale School of Medicine in support of the project, “A Cross-sectional Study of the Impact of Gambling on Patients with Schizophrenia,” one of three extramural grants awarded by the Institute in 2002.

Despite evidence that psychiatric patients have higher than average rates of gambling disorders, this study is the first to focus on patients with schizophrenia. Led by Rani Desai, Ph.D., M.P.H., the investigation will assess the prevalence and types of gambling and related behaviors and problems in patients with schizophrenia and the influence of a co-occurring diagnosis with a substance use disorder on gambling behaviors and problems.

The Elderly

As legalized gambling has expanded, as baby boomers are getting older, and as seniors have more free time to expand recreational activities, senior citizen center trips to casinos have become increasingly common. However, there is no scientific evidence, contrary to media reports, that the elderly are at an increased risk for developing gambling problems. To address the need for research on this issue, the Institute’s 2001 request for applications for social and behavioral science research identified the over-65 age group as a subpopulation in need of study. Edward Federman, Ph.D., instructor of psychiatry, Boston University School of Medicine, responded to the call with the proposal, “Gambling Among Elderly Individuals: Prevalence and Risk Factors,” for which he received a research grant of \$160,639 in 2002.

This project will examine whether cognitive impairment or limited social support increase the risk of developing gambling problems in older adults. A sample of 980 individuals who attend senior centers that provide bus trips to casinos will be screened for possible gambling problems, and 300 will be further evaluated regarding their cognitive functioning and social support. The research design will be able to determine whether mild cognitive impairment or limited social support increases the probability that individuals who frequent senior centers will participate in gambling trips and, within that group, whether those factors increase the probability of developing gambling problems. Early identification of those at risk can inform policy, prevention and treatment efforts, permitting those who safely enjoy the casino trips to continue the activity, while protecting more vulnerable individuals.

Homeless Population

Treatment providers often overlook the possibility of gambling-related problems among the profoundly poor. Howard Shaffer, Ph.D., C.A.S., and colleagues examined the prevalence of disordered gambling and its association with treatment of psychiatric and substance use disorders among a cohort of homeless people seeking treatment at a community services program. Between 1998 and 2000, intake workers evaluated the level of gambling disorders among 171 consecutive homeless persons (aged 18-59 years) with substance use disorders. Data show that the prevalence rates of level 2 and level 3 gambling disorders were 12.8 percent and 5.5 percent, respectively. These rates are higher than that of the general adult population but comparable to those of other patients with substance use disorders and psychiatric diagnoses. The authors of the study concluded that these findings should encourage clinicians working with homeless people to screen for gambling-related problems and disorders. The study, "Gambling disorders among homeless persons with substance use disorders seeking treatment at a community center," was published in 2002 in *Psychiatric Services*.

Research Methods

Urges in Real and Retrospective Time

Overwhelming urges are one of the hallmarks of addictive disorders. However, scientists have yet to agree on a theoretical definition of craving or the role that these urges play in the course of addiction. Consequently, further investigation of these phenomena is required. Such research relies on self-report by the research subjects, however, and scientists have identified a number of problems with such data, including inaccuracies that can be traced to memory distortion.

This study, involving subjects who are seeking treatment for gambling disorders, will collect data in real time using Portable Digital Assistant (PDA) technology. The expectation is that this procedure will diminish the exaggeration effect associated with retrospective recall and will have the potential to enhance treatment and improve the experience of recovery.

GAMTOMS: Gambling Assessment and Treatment Outcome Monitoring System

In 2002, the Institute awarded a \$172,294 grant to Randy Stinchfield, Ph.D., L.P., at the University of Minnesota in support of a project that will address the need for a reliable and valid treatment outcome assessment tool. Because pathological gambling affects multiple domains of the gambler's life, it is important for treatment outcome assessment to be multidimensional. Stinchfield and colleagues have developed the Gambling Treatment Outcome Monitoring System (GAMTOMS), based upon the most up-to-date treatment outcome monitoring technology as recommended by the Center for Substance Abuse Treatment and the National Institute on Drug Abuse. This study will collect a diverse range of reliability and validity data on 200 adults seeking help for problems associated with pathological gambling.

Public Policy: **"Toward a Science of Gaming Regulation"**

A flood of new and adapted regulations designed to protect populations exposed to gambling have been adopted worldwide. The purpose of this study is to examine the influence and impact of specific gaming regulations as they exist in each country and develop a science of gaming regulation. The investigators will examine the justification behind each statute and its purpose as it relates to the epidemiology of gambling. The project will assess how each regulation fits into a general public health framework, the intended target or targets of each regulation, estimated costs and benefits, and various other factors. The study will provide an improved understanding of current gaming-related regulations and help guide the creation and implementation of future gaming regulations.

*In 2002, the Institute
\$505,410, to the Yale
and the University of*

Program Advisory Board

The Program Advisory Board collaborates with the staff of the Institute for Research on Pathological Gambling and Related Disorders in developing research priorities and procedures for the Institute. Composed of leading academic researchers representing the relevant research domains, including experts on gambling, the Program Advisory Board performs a peer-review quality assurance function to evaluate whether the Institute's research standards have been met, using the methods of the National Institutes of Health as a reference standard. The following individuals served on this board in 2002:

Mark Appelbaum, Ph.D.
Associate Vice Chancellor
Professor of Psychology
University of California, San Diego

Linda B. Cottler, Ph.D.
Professor of Epidemiology in Psychiatry
Washington University School of
Medicine

Joseph T. Coyle, M.D.
Eben S. Draper Professor of Psychiatry
Harvard Medical School

Jeff Derevensky, Ph.D.
Professor of Applied/Child Psychology
Associate Professor of Psychiatry
McGill University

William Eadington, Ph.D.
Professor of Economics
Director
Institute for the Study of Gambling and
Commercial Gaming
University of Nevada, Reno

Richard I. Evans, Ph.D.
Distinguished University Professor of
Psychology
University of Houston

**Eileen Luna Firebaugh, J.D.,
M.P.A.**
Associate Professor
American Indian Studies
University of Arizona

Herbert D. Kleber, M.D.
Professor of Psychiatry
Columbia University College of
Physicians and Surgeons

Barry Kosofsky, M.D., Ph.D., Chair
Associate Neurologist
Massachusetts General Hospital
Associate Professor of Neurology
Harvard Medical School

Robert Ladouceur, Ph.D.
Professor of Psychology
Université Laval

David C. Lewis, M.D.
Donald G. Millar Professor of Alcohol
and Addiction Studies
Brown University

Richard McGowan, S.J., D.B.A.
Associate Professor of Economics
Boston College

Brian McKay, J.D.
Of Counsel
Lionel Sawyer & Collins
Former Attorney General
State of Nevada

Lisa M. Najavits, Ph.D.
Director
Trauma Research Program
Alcohol and Drug Abuse Program
McLean Hospital
Associate Professor of Psychiatry
Harvard Medical School

Peter E. Nathan, Ph.D.
University of Iowa Foundation
Distinguished Professor of Psychology
University of Iowa

Charles F. Wellford, Ph.D.
Professor and Chair
Department of Criminology and
Criminal Justice
University of Maryland

Ken C. Winters, Ph.D.
Associate Professor of Psychiatry
University of Minnesota
Director
Center for Adolescent Substance Abuse
Research

Harold Wynne, Ph.D.
President
Wynne Resources, Ltd.

*awarded three external grants, totaling
School of Medicine, Boston University
Minnesota for new research projects.*

“Ultimately, neuroscience research will lead to an independent gold standard for the identification of gambling disorders.”

Neuroscience

Research that focuses on the neurobiology of gambling disorders has been a research priority for the National Center for Responsible Gaming (NCRG) since 1997. The NCRG has supported 10 investigations using brain imaging, genetics and clinical drug trials to unravel the neurobiology of gambling disorders and help lead to effective treatment strategies. Ultimately, neuroscience research will lead to an independent gold standard for the identification of gambling disorders.

Although a young field, early neuroscience research on gambling is encouraging. Studies have shown that pathological gamblers have altered dopaminergic and serotonergic functions (neurotransmitters related to mood and judgment). Biogenetic vulnerabilities have been identified among pathological gamblers, and there is evidence to suggest that there may be genetic markers for novelty-seeking behavior among normal subjects that can predispose people to take chances. Finally, new evidence suggests there are common reward circuits in the central nervous system responsible for the experiences associated with anticipation surrounding the effects of substance use, the acquisition of money and the appreciation of beauty.

In 2002, the Institute for Research on Pathological Gambling and Related Disorders announced the fourth request for applications for neuroscience projects. Eighteen applicants were selected to submit full proposals, based on letters of intent. These proposals will be evaluated in 2003 by a peer review panel of distinguished scientists using the rigorous review criteria of the National Institutes of Health.

Neuroscience Peer Review Panel

Barry Kosofsky, M.D., Ph.D., Chair
Associate Neurologist
Massachusetts General Hospital
Associate Professor of Neurology
Harvard Medical School

Michael Bozarth, Ph.D.
Associate Professor of Psychology
State University of New York-Buffalo

Hans Breiter, M.D.
Co-Director
Motivation and Emotion Neuroscience Center
Massachusetts General Hospital
Assistant Professor of Psychiatry
Harvard Medical School

Gregory Gasic, Ph.D.
Assistant Neuroscientist
Athinoula Martinos Center for Biomedical Imaging
Department of Radiology
Massachusetts General Hospital
Instructor of Radiology
Harvard Medical School

Jon E. Grant, M.D., J.D.
Co-Director
Impulse Control Disorders Clinic
Department of Psychiatry
University of Minnesota School of Medicine

Richard LaBrie, Ed.D.
Associate Director of Research and Data Analysis
Division on Addictions
Harvard Medical School

Scott Lukas, Ph.D.
Chief
Clinical Neuropsychopharmacology Laboratory
McLean Hospital
Associate Professor of Psychiatry
Harvard Medical School

David Self, Ph.D.
Associate Professor
Lydia Bryant Test Professorship
Department of Psychiatry
University of Texas Southwestern Medical Center

NCRG-Funded Research in Print

In 2002, the findings of research supported by the National Center for Responsible Gaming (NCRG) were published in a variety of peer-reviewed journals. One of the most significant, “Gambling and related mental disorders: A public health analysis,” was published in the 2002 *Annual Review of Public Health*. Authored by Howard Shaffer and David Korn, this publication marked the first time that the topic of gambling disorders was included in the prestigious Annual Reviews series, among the most highly cited publications indexed by the Institute for Scientific Information’s *Journal Citation Report*. In this seminal publication, Shaffer and Korn advocated a public health approach to gambling issues:

A public health viewpoint can lead to the design of more comprehensive and effective strategies for preventing, minimizing, and treating gambling-related pathologies and encourages public policy makers to distinguish acceptable from unacceptable risks. It promotes an epidemiological examination of gambling and gambling-related disorders to better understand the distribution and determinants of gambling as well as the factors that influence a transition to disordered states (Shaffer & Korn, 2002).

Observing the consistent prevalence rates for the general adult population across regions and cultures, the authors concluded that “the era of general population studies is likely near an end” and that more focus should be given to vulnerable and at-risk populations, where the greatest public health advances are likely to be made.

Several 2002 publications of NCRG-funded research reflect the growing interest in the vulnerability of special populations to developing gambling disorders. University of Minnesota researcher Ken Winters and colleagues published a rare longitudinal study on youth gambling in the March 2002 issue of *Psychology of Addictive Behaviors*. The study involved interviews with 305 Minnesota-based students at three intervals (ages 16, 18 and 24) over an eight-year period. Although the study found no significant increase in the rate of problem gamblers from adolescence to young adulthood, it found several risk factors that would likely contribute to the potential for future gambling problems, including early interest in gambling,

substance abuse, school problems, juvenile delinquency, male gender and parental history of problem gambling.

“Because of the significant increase in the rate of at-risk gamblers at the young adulthood stage, perhaps the most important assessment we can make from this study is the importance of monitoring the course of gambling behaviors as young people mature and to initiate prevention programs prior to the teenage years,” said Winters. “Screening teenagers and young adults with a high-risk profile for possible gambling problems is a crucial element to prevention, as well,” he added.

Gambling disorders among homeless substance abusers was the subject of a study by Howard Shaffer and colleagues at Harvard Medical School’s Division on Addictions. Published in *Psychiatric Services*, this investigation examined the prevalence of disordered gambling and its association with treatment of psychiatric and substance use disorders among a cohort of homeless people seeking treatment at a community services program. The investigators found prevalence rates of level 2 and level 3 gambling disorders (12.8 percent and 5.5 percent, respectively) that were far higher than that of the general adult population, but comparable to those of other patients with substance use disorders and psychiatric diagnoses. Program participants with level 3 gambling disorders had been homeless more often and at a younger age and had less substance abuse treatment and more psychiatric treatment than participants with level 1 or level 2 gambling disorders. Participants with level 2 gambling disorders had been homeless more often and for a longer duration than participants without gambling disorders. The authors concluded that these findings should encourage clinicians working with homeless people to screen for gambling-related problems and disorders.

Casino employees represent a unique and important subpopulation, with full access and exposure to gambling compared to the general public. Led by Shaffer, the team at the HMS Division on Addictions conducted a long-term study of casino employees that addresses the question that most often arises in debates about the expansion of legalized gambling: Does increased exposure to gambling opportunities necessarily lead to increased cases of pathological gambling? The Harvard investigation offers insights into this issue but also reveals patterns that might have implications for the general public and our understanding of the disorder.

Findings from these investigations have been published in various scientific journals, including the *Journal of Social Psychology*, in 2002. Observing the same population over time afforded the opportunity to address questions about the natural history or course of the disorder and, in particular, the conventional wisdom that has portrayed pathological gambling as a progressive and chronic disorder, i.e., once symptoms emerge, the gambler always gets progressively worse, moving to level 3, the most severe form of the disorder (e.g., American Psychiatric Association, 1994). The findings of this study, however, challenge this notion of disordered gambling. The data suggest that there is more movement among the various levels of disordered gambling, not only toward more severe states but also toward healthier levels, than is recognized by the more traditional understanding of pathological gambling. In this study, the majority of level 3 gamblers tended to become level 2 gamblers. The authors conclude that the conventional wisdom about disordered gambling as “always progressive” needs reconsideration (Shaffer & Hall, 2002).

2002 Publications by NCRG-funded Investigators

- Comings, D.E., Saucier, G., & MacMurray, J.P. (2002). Role of DRD2 and other dopamine genes in personality traits. In J. Benjamin & R.P. Ebstein (Eds), *Molecular genetics and the human personality* (165-191). Washington, D.C.: American Psychiatric Publishing, Inc.
- Grant, J.E. & Kim, S.W. (2002). Effectiveness of pharmacotherapy for pathological gambling: A chart review. *Annals of Clinical Psychiatry*, 14(3), 155-161.
- Kim, S.W., Grant, J.E. & Grosz, R.L. (2002). Pathological gambling: Current status and new treatments. *Minnesota Medicine*, 85, 48-50, 52.
- Potenza, M.N. (2002). A perspective on future directions in the prevention, treatment, and research of pathological gambling. *Psychiatric Annals*, 32, 203-207.
- Potenza, M.N., Fiellin, D.A., Heninger G.R., Rounsaville, B.J. & Mazure, C.M. (2002). Gambling: An addictive behavior with health and primary care implications. *Journal of General Internal Medicine*, 17(9), 721-32.
- Shaffer, H.J. (2002). Is “computer addiction” a unique psychiatric disorder? *Psychiatric Times*, XIX (4), 35-36.

References

- American Psychiatric Association. (1994). *DSM-IV: Diagnostic and statistical manual of mental disorders* (Fourth ed.). Washington, D.C.: American Psychiatric Association.
- 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., Freed, C. R., & Healea, D. (2002). Gambling disorders among homeless persons with substance use disorders seeking treatment at a community center. *Psychiatric Services*, 53(9), 1112-1117.
- Shaffer, H.J. & Hall, M.N. (2002). The natural history of gambling and drinking problems among casino employees. *Journal of Social Psychology*, 142 (4), 405-424.
- Winters, K.C., Stinchfield, R.D., Botzet, A. & Anderson, N. (2002). A prospective study of youth gambling behaviors. *Psychology of Addictive Behaviors*, 16, 3-9.
- Shaffer, H.J., Freed, C. R., & Healea, D. (2002). Gambling disorders among homeless persons with substance use disorders seeking treatment at a community center. *Psychiatric Services*, 53(9), 1112-1117.
- Shaffer, H.J. & Hall, M.N. (2002). The natural history of gambling and drinking problems among casino employees. *Journal of Social Psychology*, 142 (4), 405-424.
- 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.
- Stinchfield, R. (2002). Youth gambling: How big a problem? *Psychiatric Annals*, 32, 1-7.
- Stinchfield, R. (2002). Reliability, validity, and classification accuracy of the South Oaks Gambling Screen (SOGS). *Addictive Behaviors*, 27(1), 1-19.
- Winters, K.C., Stinchfield, R.D., Botzet, A. & Anderson, N. (2002). A prospective study of youth gambling behaviors. *Psychology of Addictive Behaviors*, 16, 3-9.

The education dimension of the National Center for Responsible Gaming's (NCRG) mission is fulfilled through a variety of programs and activities. The NCRG strives to raise public awareness of pathological gambling; provide meaningful research-based education for clinicians, health providers, the gaming industry, regulators, legislators, the legal community, media and others; and promote a lively exchange of ideas within the field of gambling research.

ANNUAL CONFERENCE

“Rethinking Addiction: How Gambling and Other Behavioral Disorders are Changing the Concept and Treatment of Alcohol and Substance Use Disorders”

The NCRG held its third annual conference Dec. 8–10, 2002, at The Mirage casino-hotel in Las Vegas.

The two-day conference, “Rethinking Addiction: How Gambling and Other Behavioral Addictions are Changing the Concept and Treatment of Alcohol and Substance Use Disorders,” attracted a record number of attendees. More than 300 addictions researchers, treatment providers, public health policy-makers and gaming industry executives gathered to share insights into how new studies of problem gambling and behavioral disorders are expanding general theories about all addictions, including substance abuse.

Howard Shaffer, director of Harvard Medical School's Division on Addiction, discussed how new areas of pathological gambling and behavioral research are returning the concept of addiction to its origins. He noted that recent studies using new technologies to study the brain have shown that anticipation of cocaine, money and beauty energize the brain's reward system in the same way, indicating that the brain is the final pathway for all addictive behaviors.

“Behavioral disorders like pathological gambling allow us to observe the addictive process, unclouded by drugs or alcohol,” Shaffer said. “This new understanding eventually can result in improved prevention and treatment strategies for all addictive disorders.”

Other conference speakers discussed advancements in the addictions fields, ranging from substance abuse and shopping, to sex addiction. Some of the nation's leading addictions researchers and treatment providers examined the common links between pathological gambling and other disorders and the efficacy of existing treatment paradigms in addressing current health issues. On the public health front, experts from the Massachusetts Department of Public Health discussed how the state is incorporating gambling issues into the continuum of services provided through state drug treatment services.



The conference was co-sponsored by the NCRG, Institute for Research on Pathological Gambling and Related Disorders at the HMS Division on Addictions, and the Nevada Council on Problem Gambling.

The subject matter of the 2002 conference captured the attention of numerous media outlets. The conference was covered by the Associated Press; *Las Vegas Sun*; *Las Vegas Review-Journal*; *Global Gaming Business*; KLAS Channel 8; KLAS — Las Vegas One TV, “Face to Face with Jon Ralston;” KMOS-AM Radio (St. Louis, Mo.); and KOH-AM Radio (Reno, Nev.).

PROGRAMS

Scientific Achievement Awards

In 2002 the NCRG established an annual “Scientific Achievement Awards” program to formally honor those individuals who have made exceptional scientific contributions to the field of gambling research. The inaugural event was held during the NCRG’s 2002 annual conference.

The late Robert Custer, M.D., whose groundbreaking work led to the recognition of pathological gambling as a mental health disorder, was honored with the NCRG’s 2002 Career Achievement Award. Nancy Petry, Ph.D., an associate professor of psychiatry at the University of Connecticut School of Medicine, was the recipient of the 2002 NCRG Young Investigator Achievement Award and recognized for her impact in finding effective treatment options for pathological gambling. Award winners were selected by an independent committee of distinguished leaders in the field of addictions and gambling research, chaired by Joseph Coyle, M.D., Harvard Medical School.

The program was sponsored by Argosy Gaming Company; Boyd Gaming Corporation; Harrah’s Entertainment, Inc.; Isle of Capri Casinos, Inc.; Mandalay Resort Group; MGM MIRAGE™; and Station Casinos, Inc.

EDUCATIONAL RESOURCES



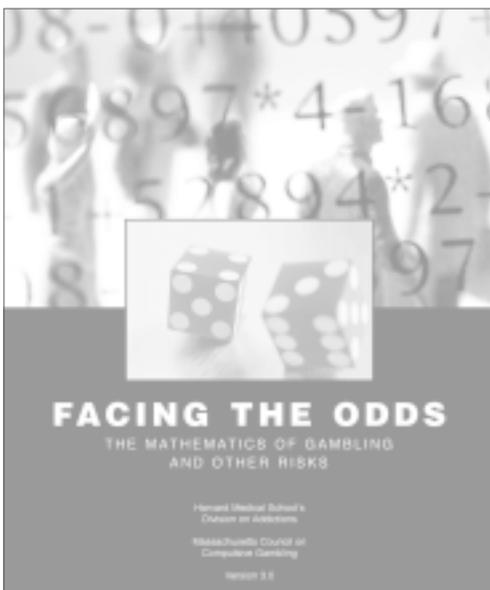
- *Responsible Gaming Quarterly* is a joint publication of the NCRG and the American Gaming Association (AGA). The publication highlights initiatives throughout the industry, government, academia and the treatment community to address disordered gambling

issues. The publication is an effort to pull together information from these diverse sources, all of which share a common goal of prevention and treatment of gambling disorders.

- *The WAGER* is a weekly online research bulletin rated by *The New York Times* as one of the best Web sites on gambling research. The mission of *The WAGER*, which has a weekly circulation of 15,000, is to gather, distill, and share resources in order to provide readers with a direct pipeline to the latest information on gambling issues.
- In 2002, the NCRG upgraded its Web site to create a new and improved resource. Information about the latest scientific research on disordered gambling, the research grant application process, the NCRG’s education initiatives, upcoming events and conferences, as well as video clips from leading experts on responsible gaming, are now included on the Web site at www.ncrg.org.



YOUTH INITIATIVES



“Facing the Odds: The Mathematics of Gambling and Other Risks”

The NCRG and the HMS Division on Addictions have teamed up to disseminate the ground-breaking curriculum “Facing the Odds: The Mathematics of Gambling and Other Risks.”

Designed for use at

the middle-school level, “Facing the Odds” presents statistics and probability in an integrated, engaging style. The goal of the curriculum is to increase students’ interest in math and improve students’ critical thinking ability, number sense and knowledge of the mathematics of gambling so they can develop rational views about gambling and make their own informed choices when confronted with gambling opportunities. The curriculum is available free of charge online at www.hms.harvard.edu/doa/. Educators are welcome to download and modify the curriculum to meet the particular needs of their students. For further information, contact Christine Reilly at christine_reilly@hms.harvard.edu.

EVENTS AND PRESENTATIONS

- The NCRG and the Institute for Research on Pathological Gambling and Related Disorders shared an information booth during the 2002 Global Gaming Expo (G2E) in September. Individuals from the NCRG, Institute, and HMS Division on Addictions were on hand to talk with attendees and distribute information.
- Howard Shaffer, Ph.D., C.A.S., director of the HMS Division on Addictions and principal investigator for the Institute, with his colleague Richard LaBrie, Ed.D., associate director of research and data analysis at the Division on Addictions, gave several presentations in 2002 offering a public health perspective on gaming regulations. Their presentations focused on the purpose of various regulations with regard to problem gambling. The pair presented their analysis at G2E and during the annual conference for the International Association of Gaming Attorneys (IAGA). PowerPoint versions of these presentations are available online through Harvard (www.hms.harvard.edu/doa/ and click on Library and Archives, then Lectures and Handouts).
- Shaffer also presented “Psychiatric Epidemiology of Gambling: Lessons about Addiction,” at the annual meeting of the American Academy of Addiction Psychiatry in December, and “Gambling and Related Mental Disorders: Lessons about Addiction,” at the annual meeting of AMERSA (Association for Medical Education and Research in Substance Abuse).

THE NCRG LOOKS TO THE FUTURE

A Solid Foundation

Since 1996, the National Center for Responsible Gaming (NCRG) has been a proven leader in the field of scientific research in pathological and youth gambling. In its seventh year, the NCRG has advanced the field to a new level and far surpassed what most expected. Because of the NCRG we now have:

- the Institute for Research on Pathological Gambling and Related Disorders, which oversees evaluation and funding of gambling research grants
- the largest number of grants devoted to gambling research of any organization, including the National Institutes of Health
- the first reliable statistics on the rate of gambling disorders in the United States and Canada
- promising treatment options for gambling disorders, both pharmacologic and behavioral
- a new understanding of the brain's "reward system" and how it relates to pathological gambling
- further evidence of the genetic factor in pathological gambling
- a greater understanding of the health risks of casino employees
- a clearer picture of adolescent gambling problems
- a new awareness of the need for a public health approach to gambling that looks at both costs and benefits

“Our goal is to be able to provide proven, scientifically developed educational, prevention and treatment tools to assist problem gamblers.”

“The NCRG will fund new research initiatives on gambling and its consequences that will result in practical prevention, education and treatment applications.”

What the Future Holds

With a solid foundation of success in advancing scientific research in disordered gambling, today the NCRG is looking to new ways of providing leadership in the field of responsible gaming. The NCRG has established a new mission statement to reflect this goal:

“The NCRG’s mission is to be the leading source of science-based research and information on gambling and health, advancing education, prevention, treatment and public policy.”

The NCRG will remain the pre-eminent source of funding for independent, peer-reviewed scientific research into pathological and youth gambling by providing financial support to the Institute, while adding a new objective — funding new research initiatives on gambling and its consequences that will result in practical prevention, education and treatment applications.

For example, practical industry research could potentially help us establish a set of “best practices” guidelines for the gaming industry to manage responsible gaming issues.

The NCRG will also endeavor to be a strong educational resource for a broad spectrum of groups, including regulators, lawmakers, the public and all segments of the gaming industry. Our goal is to be able to provide proven, scientifically developed educational, prevention and treatment tools to assist problem gamblers.

Additionally, the NCRG will strive to escalate the awareness, dialogue and education surrounding disordered gambling and subsequent treatment and prevention alternatives. For example, the NCRG hopes to better communicate and put into context what disordered gambling research really means for the general public, policy-makers and the industry itself. We can help raise awareness through extended speaking opportunities, training seminars and educational programs. Plans are already under way to expand the NCRG’s annual conference to provide a broader platform for discussion of disordered gambling, not only from a clinical perspective, but from a policy point of view as well.

As the NCRG aspires to broaden its horizons while maintaining its high standard of excellence, it will embrace the exciting challenges that lay ahead. And as we develop our future plans, the one objective that remains clear is our desire to help individuals who have problems gambling responsibly. All of the NCRG’s new goals will ultimately help play a part in identifying individuals who may need treatment for gambling disorders, and help prevent some individuals from reaching that point.

FINANCIAL STATEMENTS (UNAUDITED)

JAN. 1, 2002 – DEC. 31, 2002

ASSETS

Current Assets

Checking/Savings	\$927,662
Accounts Receivable	6,500
Total Current Assets	<u>934,162</u>

Other Assets

Grants Receivable*	
2002	200,000
2003	215,000
2004	215,000
Beyond 2004	150,000
Unamortized Discount	(16,124)
Uncollectible Estimate	(100,000)
Total Pledges Receivable	<u>663,876</u>
Total Other Assets	<u>663,876</u>

TOTAL ASSETS **\$1,598,038**

LIABILITIES & NET ASSETS

Liabilities

Current Liabilities	
Accounts Payable	\$46,983
Other Current Liabilities	
Grant Payable - Harvard 2002	825,000
Grant Payable - Harvard 2003	1,144,000
Research Grants Payable**	127,845
Total Other Current Liabilities	<u>2,096,845</u>
Total Current Liabilities	<u>2,143,828</u>
Longterm Liabilities	
Grant Payable - Harvard 2004	<u>1,144,000</u>
Total Liabilities	<u>3,287,828</u>

Net Assets

Net Assets	257,732
Year to Date Revenue Over (Under) Expenses	(1,947,522)
Total Net Assets	<u>(1,689,790)</u>
TOTAL LIABILITIES & NET ASSETS	<u>\$1,598,038</u>

*Grants pledged to the NCRG. Receivables are to be collected over the next five years.

**Research grants are payable over multiple years based upon the research program term.

Blank inside back cover



NATIONAL CENTER FOR
RESPONSIBLE GAMING

P.O. BOX 14323 WASHINGTON, D.C. 20044-4323
www.ncrg.org